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ABSTRACT

Part of the larger Informal Education Series, this publication brings together many of the materials prepared by Rosanne Kessens for teachers and parents involved in Follow Through settings. Contents first explore theme development as an integrated approach to learning and then describe strategies for planning themes. Subsequent materials offer guidelines for beginning an animal theme as well as for organizing themes about animals imaginary and ridiculous, talking animals, pourquoi stories, fables, small bugs, turkeys, houses, a hat collection, machines helping people work, toys and Christmas wishes, snow, water, and wind. (RH)

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THEMES

By

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Grand Forks, North Dakota 58202

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Introduction

This publication, part of the larger Informal Education Series, brings together many of the materials prepared by Rosanne Kessens for teachers and parents in our Follow Through settings. Rosanne served for a decade our Follow Through program, principally in Zuni, New Mexico and Fort Yates, North Dakota. Her death in 1981, after many years of battling cancer, was a great loss.

The materials are special because Rosanne was special. She was a gifted teacher, imaginative in her use of materials, attentive to children's needs and interests, and supportive of deeply cherished community values. As a Resource Colleague (or teacher-parent educational advisor) she brought these understandings to others. In relation to her role as a Resource Colleague, Rosanne prepared monthly notes, a means of sharing ideas and stimulating classroom practices consonant with the philosophical orientation of our program. These monthly notes continue to be so popular among teachers and parents that we felt we should collect some of them for inclusion in a memorial booklet that could be made easily accessible. The notes selected are organized around such common themes as animals, hats, habitats, and seasons. But these common themes took on for Rosanne many interesting directions. She encouraged through them pathways to many diverse possibilities for learning.

Rosanne was an inspiration to all of us who worked closely with her. She could extend the possibilities of almost any idea or physical material presented to her. And her enthusiasm was never ending. We are pleased to present this volume in the Informal Education Series as an ongoing memorial to Rosanne's educational commitments.

Vito Perrone
Dean
Center for Teaching and Learning

Developing a Theme: An Integrated Approach to Learning

TIME -- it seems most of us never have enough of it. This is especially true as we try to provide for the educational needs of all children under our care in an environment which will foster growth and learning. However, in attempting to fully educate each and every child we have allowed schedules and curriculums to dictate much of what happens in our classrooms. Clock watching has become a major pastime in many rooms as bus schedules, lunch times and classes for special students (Title I, gifted, speech, resource rooms, etc.) keep us constantly aware of the clock and the passage of time. Those schools fortunate enough to have music, art and physical education instructors must also devise schedules which will best utilize their time and talents. All of this scheduling often leaves the classroom teacher frustrated in trying to find an uninterrupted block of time for teaching or even to have a group meeting with all of the students. At the same time, teachers are mandated to teach more and more subject areas. We are asked not only to teach math, reading and science, but also conservation, career education and a host of other subjects, all of them important for living in today's fast-paced and ever changing world. Trying to fit all these subject areas into an already highly scheduled day often results in less commitment to explore a subject or interest in depth and more and more frustration. Pressures for higher math and reading test scores, along with criticism concerning writing and spelling also contribute their share of frustration and conflict in the life of the classroom teacher. All too often, as the pressures become more intense, art, music, drama, science and social studies become an isolated lesson once or twice a week or are used as rewards for students' good behavior and work well done.

All of the above provide special challenges for dedicated and concerned teachers. One way of meeting these challenges, I believe, is to organize curriculum, materials, time and activities around a theme. Imagine a very large umbrella or circus tent under which a group of people have gathered. The tent or umbrella provides them with a boundary in which they interact through conversation and movement. A theme becomes the large umbrella or tent providing a structure for activities, materials and people to interact and explore together.

During the past years, as I attempted to cope with all the demands of the classroom, I found that organizing curriculum around a theme resulted in better use of time and materials and increased my ability to incorporate isolated subject areas of the curriculum into learning experiences for the children. Often we, myself and the children, were able to include areas not suggested by curriculum guides or basal texts, but were of greater interest and had more learning potential for students. One very positive aspect which I had not anticipated was the frequency and quality of interactions I was able to

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From Insights, May 1981, Vol. 13, No. 8, pp. 2-11.

have with students. As children worked on research, construction and writing projects I realized we were talking and listening more to each other. This resulted in my being able to individualize my teaching to a much greater degree than I had been able to previously. I now knew much more about my students. I was often amazed by what children already knew about various subjects, but also surprised by some of the false information and lack of concepts which became apparent during our interactions. I found my classroom becoming a "doing" classroom with the students truly working and solving problems. As they did projects and activities, I found they were learning, retaining what they had learned and, more importantly, applying their learning to everyday situations and problems. Large group activities and individual student projects which developed allowed all students to participate, at least part of the time, in art, music, science and all other curriculum areas. Concern for the child that always missed a certain subject or activity no longer became a concern. Working with a theme provided me with the FLEXIBILITY I needed to develop an interesting and challenging learning environment for children, and at the same time, it also gave me a STRUCTURE for planning, teaching and evaluating.

The length and scope of a theme is dependent on the interest and abilities of teacher and students. It may be as short as an hour's activities revolving around the study of color, for example, or it may last for weeks as children study a subject in depth. I have known teachers who had a major theme each month and one who even had a theme for the entire year. At the same time that a main theme is developing in the class, smaller themes also develop simultaneously as groups of children work on projects or in curriculum areas. These may come about because of an interest developing from the main theme or as the result of a story, question, experiment, natural phenomena or awareness of world and local events.

In fact, we don't have to search far or long for themes. They can be found almost everywhere and can be drawn from every curriculum area, but the most successful are those which develop from the interest and environment of children. Children are interested in so many things in their everyday world that if we are sensitive to their concerns, questions and delights we have no difficulty finding a topic for study. Since the interest is already there, one does not have to resort to any type of contrived motivation, which says to children that what is happening here in the classroom has no relationship to what they perceive as the world outside the classroom. As teachers, this certainly is not our intention, or we would not put so much time and effort into trying to provide motivation for students. However, an artificial motivation, which does not come from the interest of the students often does give that impression to them.

No activity, lesson or project, no matter how greatly interested the children are in it, is successful without the enthusiasm and skill of the teacher. It is you, the teacher, who makes the learning experience successful for children as you question, guide, organize and model behavior. A willingness to be open and flexible in one's plans and scheduling, along with a commitment to involve children in their own learning, is necessary for the success of the theme approach.

DEVELOPING THE THEME

Although there are a number of ways one might go about developing a theme, this article will attempt to give an overview of one approach and some ideas for working with a theme of "Bridges." It is not meant to be a blueprint for every classroom and teacher, but rather as a starting point for reflection and discussion. Each teacher must adapt and modify the following ideas to fit the needs of students and his/her own style of teaching.

WEBBING

A technique which I often use in the beginning stages of planning a theme is called webbing. It is a way of showing, in diagram form, the many possible directions which the study of a topic could lead students and teacher. By listing all the possible activities and areas for study one can move beyond the narrow confines of the topic and become more aware of the interrelatedness of concepts, materials and subject areas. It helps to prepare one's thinking so that interactions with students can occur more spontaneously and, through the intervention of questions and materials, to stimulate and expand children's thinking. It is not a lesson plan, but clarifies and helps one perceive possibilities and then becomes a reference bank to which one can refer. Later it can be used to help evaluate and assess what has occurred in the classroom.

Perhaps the easiest way to begin a webbing is to sit down with a large piece of paper and begin brainstorming all the ideas which occur to you about a topic. One idea leads you into another and that idea spins you off in another direction. You will soon have a paper full of ideas and activities. As you are jotting down your ideas, relationships begin to emerge and you can begin grouping them under various headings. One of the most enjoyable ways of doing this brainstorming is to meet with other teachers whose class will be studying the same topic. Each of you will have the advantage of each other's ideas and expertise. This need not take a great deal of time. One of the advantages of webbing is that it is always incomplete. It can be added to and changed as thoughts and ideas occur to you.

SETTING OBJECTIVES

Before beginning your web, however, you will probably want to list skills, concepts and objectives which children will be learning and practicing as the theme progresses. This list will vary from classroom to classroom and from theme to theme. It should come mainly from a teacher's knowledge about the needs and abilities of the children. Observation of children and their work, along with good record keeping, will provide you with a firm foundation in determining which goals and objectives (of the many which are listed in the basal texts and curriculum guides) are the most appropriate for your students. The interrelatedness of skills and objectives among the various curriculum areas becomes more apparent by placing them in a webbing using subject areas as headings. Let's begin such a web for a hypothetical kindergarten classroom. The concepts, objectives and skills have been taken from a kindergarten curriculum guide and are purposely broad, since this is a hypothetical situation. It is in no way meant to be complete or comprehensive, but only to help one become more aware of the relationships between subject areas.

As you look closely at the above webbing it can be seen that many of the skills are not confined to one curriculum area. The practice of skills and the learning of concepts crosses over subject area lines. Classification activities, for example, were given as objectives in all of the areas. Size concepts, which was listed under math, can also be learned by the child as he/she traces, builds, or uses various art materials. Learning about animals in science certainly involves using reading and writing skills and math concepts as one compares number of feet, size and weight of various animals. Or, using another example, as children build a model of a bridge they are learning about size relationships, gravity, properties of wood, metal and stone, patterning, geometric shapes and engineering principles. At the same time, they will be using prepositional phrases, learning new words for bridges and, perhaps, singing about a very famous bridge. Children use many skills and concepts at the same time. They do not use them in isolation.

GATHERING MATERIALS

Once a theme has been decided upon, it is time to begin gathering materials. I have found it helpful to have a large box available into which I can place books, pictures, games or materials. As ideas or thoughts occur, these can be jotted down and also placed in the box. In this way those good ideas do not become lost in the busyness of a school day. Some teachers keep lists of materials, books and games, and their locations, on their desk or posted in a convenient spot in the room. When they are ready to begin the theme, needed materials can be gathered quickly and easily.

Developing a web and gathering materials becomes a two way street. Working on a web for a theme helps to make you more aware of materials which can be used and the gathering of materials will often lead you in new directions, which can then be added to the web.

A WEB OF POSSIBILITIES -- BRIDGES

Why bridges you might ask. No special reason except that one day as I drove over a bridge I was struck by the repeated patterns and shapes formed by the materials used for the bridge. I began noticing other bridges and became aware of the great variety and types of bridges. Later, I began to speculate what would life be like without certain bridges in my own community and realized, perhaps for the first time, how important these bridges were to the economy and life of the community. Then during the past year there has been a great deal of controversy over where to construct an overpass (a type of bridge) in the community. Obviously, bridges have been on my mind for quite some time.

There are several reasons I would like to use this theme in a classroom.

1) *A controversy about construction of a local overpass involved everyone in the community in one way or another. The decision will have far-reaching impacts on neighborhoods and people. Children are well aware of the controversy.*

2) *Bridges are a part of everyone's life. Every community, no matter how small, has some type of bridge near by. Helping children become aware of their environment and surroundings is a major work of schools, I believe.*

3) *Children often build bridges as part of their play. Through experience they already have some idea of the importance of bridges and how they are built. This theme would help them to observe more closely, become more aware and, hopefully, perceive a relationship between school, play and the world about them.*

The webbing for bridges is by no means complete and I'm sure each person who looks at it would be able to add different dimensions and perceptions to it. It is important to remember that the purpose for doing a webbing is to expand teacher and student awareness and to determine possible directions.

Bridge/a card game
Bridge of a ship
Bridge/false teeth
To bridge something
Bridge of your nose
Meanings for Bridge
toll bridge
viaduct
overpass
span
railroad trestle
Words for Bridges
connectors
gathering of tolls
Uses of Bridges
over water
over highways
over streets
between buildings
over canyons
between hills
across ravines
Materials
vines
wood
stone
brick
iron
rope
steel
Pattern Blocks
Geoboards
triangular
trapezoid
hexagon
diamond
Length
Colors
Location of bridges
Geometric designs
Repeated patterns
BRIDGES
Locations
girder
words for bridges
sidewalk superintendent
span
piling
cofferdam
foundation
pier
String Sculpture
Learning to use compass, protractor
Observe
Compare & Contrast
Vocabulary
Architectural Styles
Arch
false
true
Roman
pointed
segmental
Truss
Famous Bridges
London Bridge
Golden Gate
Brooklyn Bridge
Roman Bridge - Ponte diAugusto
Ponte Vecchio
Rialto Bridge in Venice
song
book by Peter Spier
Lake Havasu City
Locate on maps
famous bridge builders
Length, height, spans, etc.
Types
Expansion
Covered
Drawbridge
Rolling-lift
Box-girder
Suspension
Natural
Cantilever
Aqueduct
Pontoon
Dam
Bridges in History
Poem, "Horatius at the Bridge" by Macaulay
Bridges along Erie Canal
Occupations
Engineer
Architect
Contractor
Welder
Construct bridges
unit blocks
girder sets
toothpicks
tongue depressors
Legos
ESS unit - structures
straws
Erector sets
Field Trips/Speakers
Walking trips to view various bridges/sites
Historical Society personnel
Public library to see old photos
murals
poems
books
speakers

Thus, this webbing is done for no particular grade level and is only a starting point for working with children.

SOME ACTIVITIES TO DO WITH A THEME OF BRIDGES

The song, "London Bridge" is a favorite of most children in their early childhood years. It provides a good stepping-off point for children and teacher to explore how a bridge can play a major role in a community, to use as a model for construction and art projects, or to develop language and math activities.

London Bridge is Falling Down! by Peter Spier is a book that will delight older children as well as the young ones. It's probably found in the picture book shelf of your library, but don't let that stop you from using it. In fact, older children will probably enjoy it more than the younger ones. The song becomes the text, but the illustrations vividly show the life of London during the times in which the bridge was built. Older children will be fascinated by the history of the bridge, from the first wooden Roman bridge to its stone by stone rebuilding over the Colorado River in the United States. Peter Spiers gives a brief history of the bridge at the end of the book and it makes wonderful reading. There's lots to discuss and wonder about in this book.

Take some time to learn the unfamiliar verses Peter Spier uses in the book. Children might use the tune and format of this song to write a song about a bridge in their own local community. If they do this, have your best handwriters print it on a chart and hang it in the hallway for all to read.

Take the most well-known verses from the book and write them on sentence strips and place them in envelopes or folders. Sometime when you're working with a small group of children give them the envelopes and have them use the sentence strips to resequence the various verses. Young children can do this successfully, if you have a chart with the words written on them. It becomes a good matching activity for them. Later, place the materials where they will be accessible to children to use as an independent activity. Still later, have the children cut the sentence strips apart to make individual word cards. Again have them resequence the words to form a verse. Every time children do this they will be practicing phonics, sequencing and context skills.

Building a bridge is a wonderful theme for children to depict in a mural. Paint, collage materials or crayon can all be used and everyone can contribute to and participate in the activity.

Have children make drawings of their favorite bridge found in the local community. Along with this activity bring a map of the community to the classroom so that the locations of the various bridges can be marked with colored pins, tacks or small flags.

Older children might research the names of bridges in your community. Looking back at old records, interviewing older members of the community and becoming familiar with the local historical society will provide children with many worthwhile learning experiences.

Researching why bridges are located in particular areas and comparing the present surroundings with the area when the bridge was first constructed might be of interest to a group of older students.

Bring in samples of materials from which bridges are constructed so that children can compare and contrast them. Texture, color, strength are only a few of the things children might talk about.

Students can be involved in a number of different measuring activities. Comparing measurements of bridges in your area and using tools, such as calipers or trundle wheels, to obtain measurements of the bridges will keep your students actively involved. Use chalk on a paved playground to mark off the dimensions of famous bridges, giving children some idea of size in relationship to themselves.

As you plan activities remember that in almost everything we do in school, children can ESTIMATE, PREDICT, MEASURE, OBSERVE, ORDER THINGS, COLLECT, GRAPH, RECORD, or TABULATE. The more children are involved in doing these activities in meaningful situations the better prepared they will be for taking part in the world about them.

SOME BOOKS TO USE

Carlisle, Norman. The True Book of Bridges, Children's Press, 1965.

Corbett, Scott. Bridges, Four Winds Press, 1978.

Doherty, C.H. Bridges, Meridith, 1969.

E.S.S. Unit: Structures, McGraw-Hill, New York.

Gringhuis, Richard H. Big Mac; the Building of the World's Biggest Bridge, Macmillan, 1959.

Macdonald First Library. Bridges and Tunnels, Macdonald Educational, 1975.

Peet, Creighton. First Book of Bridges, Franklin Watts, 1953.

Silverberg, Robert. Bridges, Macrae-Smith, 1966.

Spier, Peter. London Bridge Is Falling Down!, Doubleday & Co., 1967.

Steinman, David Bernard. Famous Bridges of the World, Random House, 1953.

Surany, Anico. The Covered Bridge, Young Readers Press, Katonah, NY, 1967.

Young, Edward M. The Great Bridge The Verrazano-Narrows Bridge, Farrar, Straus and Giroux, New York, 1965.

For those interested in working with themes, an excellent resource is The Web published four times a year by the Center for Language, Literature and Reading, College of Education, The Ohio State University, Columbus, Ohio 43210. This inexpensive publication is devoted to reviewing books and generally focuses on a theme.

Themes

Themes

Not enough time in the day for art, music, science, social studies, etc.? Do you want the children to have more language experiences?

The use of themes will often help a teacher in planning the curriculum which will be most beneficial to the students.

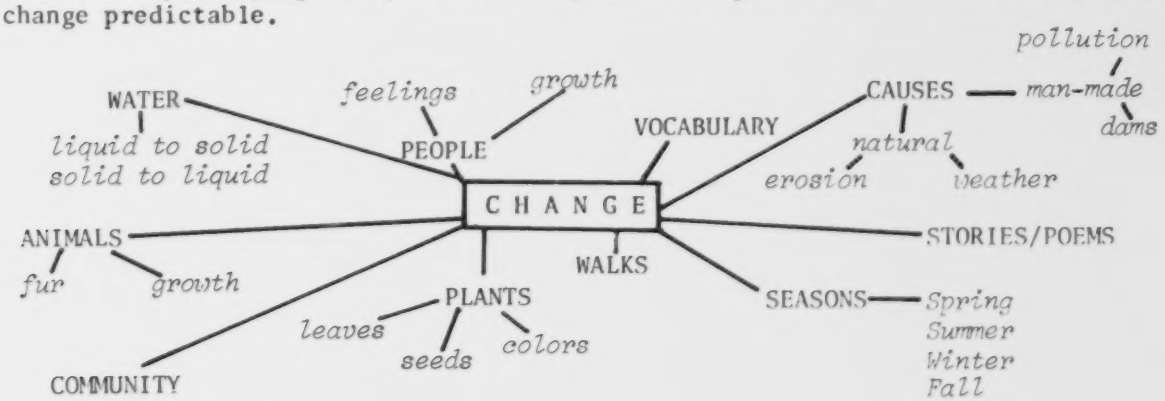
THEMES - help to integrate the curriculum areas

- stimulate various ways of investigating a subject
- allow for individual interests
- lead to knowledge about subjects which normally are not part of the curriculum
- social studies, science, spelling, art and music lend themselves to teaching through themes

Some teachers have found the process of WEBBING a valuable help in planning themes. Here are two examples of webbing which you might find helpful in your own planning.

Change

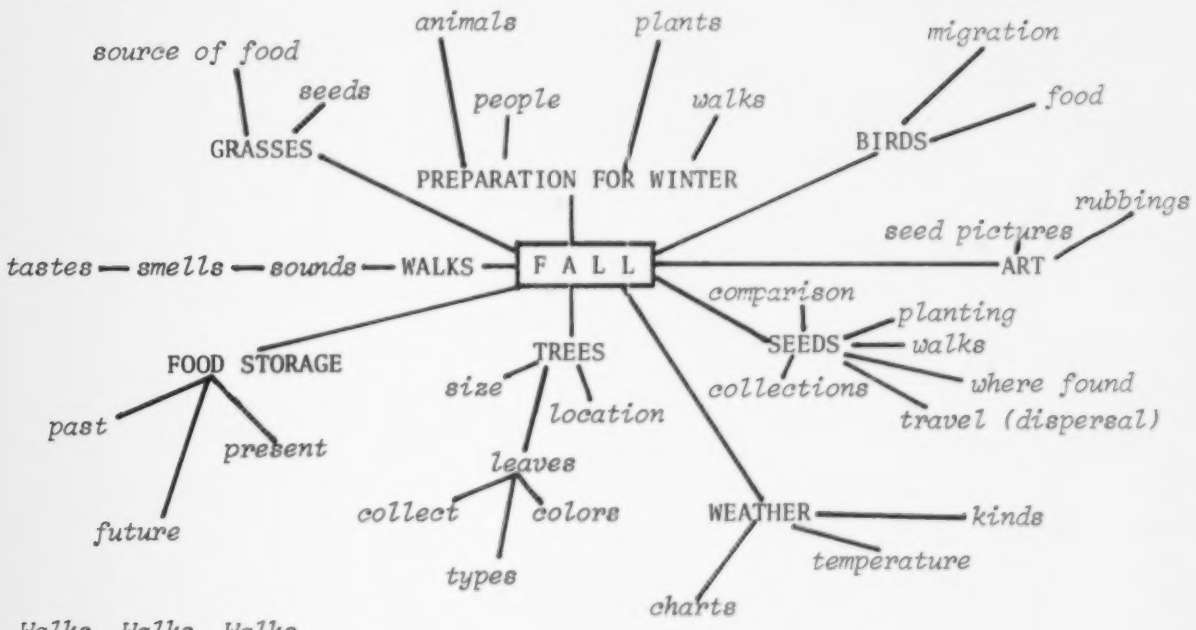
Changes occur everywhere and at all times. Change affects us and our environment. We can affect some changes; some changes are natural and beyond our control. By studying data, children may discover patterns that can make future change predictable.



From October 1978 Notes to Fort Yates Follow Through Staff, pp. 2-7.

Fall

Fall is a part of the much larger theme of change. It can be studied in more depth.



Walks, Walks, Walks

They only take ten to twenty minutes, but so much learning takes place.

For each walk have an objective in mind. You, I know, have many ideas as to what to do as a follow up to these walks. Here are just a few:

Twigs - for making designs, line drawings, parts of a mural
Seeds - for mosaics, planting, storing, sorting
Leaves - for art, science
Clouds - for shape, imagination, pictures (what do you see?)
Seeing - for murals, discussions
Stone - for paper weight, painting, animals, designs, collage
Color - for poetry, color theme

Have you ever taken a tape recorder along to record comments of children as they are on a walk? Have you ever made a talking bulletin board as a result of a walk or a field trip?

Collecting Leaves

Colored leaves pressed between clear contactpaper or wax paper (press with a cool iron) make beautiful transparencies and serve as a reminder of a collecting trip or an introduction to the study of leaf coloration.

Count the leaves.

Sort leaves by color, shape, size, feel.

A chart summarizing measurements and discoveries makes a good follow up.

Use leaves to make rubbings, prints, designs.

Watch the area around your school for changes in leaf coloration. If you are collecting leaves, you will need newspapers or magazines with absorbent pages. After the leaves have been put between the pages, put a heavy weight on them to keep the leaves from wrinkling. Keep them pressed for several days. Leaves dried this way can be used for a long time. They can even be "reconstituted" in winter months for making leaf prints by putting them between moist newspapers for 24 hours.

Examine a weed patch for leaf coloration.

Concepts of the way in which leaf coloration changes with the removal of chlorophyll can be done with water-color paints or colored overlays on an overhead projector. Start with yellow, add green - what happens? If you start with red and add green - what color is the leaf?

Collecting Trees

Get acquainted with one tree. Admire its trunk. Notice the branches, twigs and leaves. Children enjoy measuring a tree with hands and arms. How big around is the trunk? Can you put your hand around it? Two hands? Your arms? Does it take more than one child to reach around it?

Examine and feel the bark. Look at its ridges and patterns. Feel its texture and hardness. A bark rubbing can be made with wax crayons and paper as a record of the tree.

Select a tree to visit repeatedly. Observe and record changes. A dated chart with entries such as mounted leaves, twigs, flowers, rubbings, fruit and/or seeds will enable children to make seasonal comparisons.

If there are several trees of the same kind on your grounds, compare them for size, shape, leaf coloration, etc. If there are differences, can children think of explanations?

Make a trip to see how many different trees you can find. You can make a census without listing names by mounting samples of a leaf, seed, etc., from each tree. It's good to have books available for children who want to discover names by making a comparison of the specimens with illustrations.

Collecting Seeds

Examine a peanut or soaked lima bean to find the two seed leaves surrounding the immature plant. A comparison of several seeds helps children see basic similarities as well as differences. (See Informal Education Science, pp. 26-40 for detailed instructions.)

After a seed walk, have you discussed -

1. How seeds are the same?
2. How they are different?
3. How they travel? (wind, birds, animals, man, machines, hitch-a-ride, etc.)
4. Which plants do not have seeds at this time?

Collecting Grasses

There are about 1500 kinds of grasses growing in the United States. Some kinds, such as corn, oats, wheat, rye, barley, rice and sugar cane, are grown as important sources of food. Others are pasture or hay grasses. Still others are grown for lawns or to hold soil. Some grasses are classed as weeds, but even weed grasses make and hold soil and frequently serve as food for birds and other wildlife. Now when grasses are blooming, it is a good time to take a grass census.

1. How are they the same? different?
2. How are the grasses used?
3. How many different grasses can be found?
4. How do their seeds compare with seeds from a tree?

Follow up with a chart of mounted specimens to show the variety of grasses.

Grass can be experienced with all our senses.

TOUCH: feeling its coolness
rolling the round stem between thumb and finger
comparing the feel underfoot of pavement, bare ground and turf

SOUND: make a grass blade whistle

SIGHT: how many different kinds can be found

SMELL: a few grasses have distinct odors

Art

Have you used these art activities in Informal Education-Art? Everyone should have a copy of this.

Leafy Creatures	p. 20
Crayon Resist	p. 20
Nature Mobile	p. 20
Sculpture from Natural Objects	p. 20
Monoprinting with Leaves	p. 17
Monoprinting with a Heat Tray (after the print cools, cut out leaf shapes)	p. 17
Tissue Paper Overlays	p. 14
Parchment Tissue (after this is dry, let students cut leaf shapes from it. I have seen some students use their leaf shapes to make a mobile.)	p. 14
Spatter Painting	p. 12
Seed Pictures	p. 8

Leaf Rubbings

Place a variety of leaves on a table top, on the floor or on some other hard surface. Each child then arranges a leaf picture any way he wants and covers the leaves with a piece of thin but strong paper. While a partner holds the paper steady, he rubs the paper with the chalk until he gets a print of the leaves.

Bark Rubbings

Give each child several foot-square pieces of sheet material or other cloth of a solid color. White, red, green - any color will do. While one child holds the cloth against a tree trunk, another rubs the side of an oil pastel chalk or crayon over the cloth to record the texture pattern of the bark. Try plenty of trees and color combinations.

BEGINNING AN ANIMAL THEME

There are many activities in this section that deal with the very large, general theme of animals rather than a specific animal or group of animals. First of all, find out what children know about animals before you start teaching specifics. They might surprise you.

A YEAR'S WORK

There are many kinds of animals:

Animals differ in size, shape, and body coverings.

Animals move in different ways.

Animals live in different places.

Animals need food, water and air.

Animals sometimes make shelters.

Animals produce other animals like themselves.

Animals differ in the care they need.

Animals are sometimes used by people.

Animals are part of a living community.

Some animals live in groups; others alone.

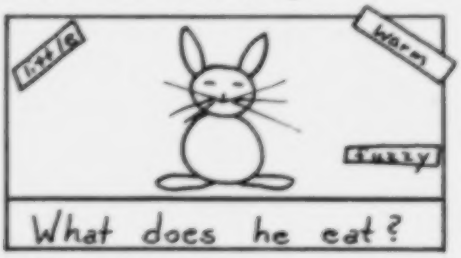
From September 1980 Notes to Fort Yates Follow Through Staff.

MATCHING GAMES

GLUE PICTURES TO CARDS TO MAKE YOUR OWN MATCHING GAMES. HAVING CHILDREN LOOK FOR PICTURES IS A GOOD SEATWORK ACTIVITY. BE SURE YOU INTRODUCE THE MATCHING GAMES TO CHILDREN BEFORE THEY ARE EXPECTED TO WORK INDEPENDENTLY WITH THEM.

ANIMAL	----------	HOMES
MOTHERS	----------	BABIES
ANIMAL	----------	WORK
BIG	----------	LITTLE
ANIMAL	----------	FOOD
PICTURE	----------	WORD

Last year Judy Thomas in Ft. Yates placed pictures of animals about the room. Descriptive words were written on strips and placed on and around the picture. A question was sometimes added. Children had lots of words immediately available to use in their writing.



Try doing this with your students. Change the question periodically.

Thanks, Judy, for this idea!

Look through all of your material to see what goes with an animal theme:

match-ups	games
tangrams	records
puzzles	filmstrips
felt shapes	blocks
books	

COLLECTING PICTURES

Many games and activities can be done if you have a large picture file of animals. Bring in a large selection of old magazines and workbooks. Have children look for pictures which can be glued on cards for games, used in the library area or placed in the writing area.

Do these daily...

BRAINSTORM

(develops language, concepts)

Estimate

Weigh

Measure

Observe

Hypothesize

Graph

Investigate

LOTTO GAMES

Use commercial ones or make your own.

Obtain a record or tape of animal sounds to place in your listening center. A ditto sheet could be made up showing pictures of various animals. Children mark the animals in the order in which they hear the sounds. Be sure to provide a "Key" nearby so children can check their answers. Allow them to do this as often as they wish. Another time provision the listening area with paper and crayons or paint. Have children draw or write a story about the sounds they hear.

Use your gym period or go outside during these lovely Fall days to do some movement activities about animals with your students. . .

1) "This is the Way We Wash Our Clothes" can be changed to:

- This is the way we ride a horse.
- This is the way we scrub a dog.
- This is the way we feed the pigs.

Make an animal number book. Some of the pages might have:

- *animals with two ears*
- *animals with four legs*
- *animals with two legs*
- *animals with more than four legs*
- *animals with one nose*

Have children cut pictures from magazines and glue to the page in their book. If they are able, they can write or copy -

A <u>bird</u> has <u>two</u> legs.

Do some brainstorming with your students for additional words. During music class, they might learn the melody, so that during the movement time, they will have more freedom to do the movement activities.

2) Mime the movement of animals.

3) Use the poem "Jump or Jiggle" by Evelyn Beyer and mime the actions of the animals.

Explore in your own community for animals. Take lots of walks. Don't forget to take such items as paper, pencil, camera and tape recorders along with you.

- Count the number of animals in a specified section.
- Graph the kinds and numbers of animals.
- Draw some of the animals.
- Observe where ears, legs and tail are positioned on the animal.
- Look for colors, sizes and shapes of animals.

Adapt a favorite animal story to be used as a play or puppet show.

Two classical music compositions you should use in your animal theme are "Peter and the Wolf" by Serge Prokofieff and "Carnival of the Animals" by Camille Saint-Saens, with verses by Ogden Nash. Most school libraries have these recordings. They are great listening activities and often generate wonderful artistic and creative movement endeavors.

ON ONE OF YOUR WALKS GIVE CHILDREN A PIECE OF PAPER APPROXIMATELY 4" X 4". ASK THEM TO FIND ANIMALS SMALLER THAN THEIR PIECE OF PAPER. LATER BRAINSTORM FOR OTHERS. ANOTHER TIME HAVE THEM FIND ANIMALS LARGER OR SMALLER THAN THEMSELVES.

THESE ACTIVITIES WILL GIVE THEM SOME CONCRETE EXPERIENCES WITH DIRECT COMPARISON.

An animal theme is a perfect time for bringing out the clay. Encourage your students to make replicas of the animals they are studying. After they have had some experiences modeling animals, make some Baker's Clay with your students (great opportunity to practice measuring skills) or give them commercial clay which can later be dried in a kiln.

LEARNING ABOUT HABITAT

Supply your classroom with many books which will show pictures or photographs of animals in their natural habitats. Some of the following books and magazines (or others similar to them) should be in <u>all</u> classrooms:

Time/Life Nature Books

National Geographic Magazine

National Geographic Books:

Song and Garden Birds of North America

Water, Prey, and Game Birds of North America

Man's Best Friend

Wild Animals of North America

Wondrous World of Fishes

the nature books written especially for children

Ranger Rick Magazine

National Wildlife Magazine

International Wildlife Magazine

We know children will be able to read very little from sources such as the above. However, they can learn a great deal from the pictures and many questions are generated, leading you and your class on many and varied explorations.

Children often have many misconceptions about where animals live. Encourage children to use the books, filmstrips, etc. (along with your direct teaching) to learn about animal habitat.

Keep charts of animals and habitats. Add to it as the year progresses.

JUNGLE FOREST	GRASSLANDS SAVANNAH	DESERT
MONKEYS	GIRAFFES	
GORILLA	RHINOCEROS	
ELEPHANT	HIPPOS	
	LEOPARDS	
	LIONS	
	ANTELOPES	
	OSTRICH	
	KANGAROOS	
	BUFFALO	

After children have been given many opportunities to see and explore animal habitats, encourage them to build or construct dioramas, peep-boxes (just like a diorama except the cover is on the top of the box and a small round hole is cut in one end) and murals.

If you have any areas near your school which can be classed as forest, grassland, beach, etc., take your children there to contrast, compare and explore. It is extremely difficult for young children to really learn about something if it is only done in the abstract from books or the teacher talking about it.

Do you have a sand or water table in your room? Or a sand pile just outside your classroom door? Add some toy animals and you'll probably have some wonderful dramatic play taking place. Why not have your students use the sand table to build a diorama showing the habitat of some animals?

CLASSIFICATION ACTIVITIES

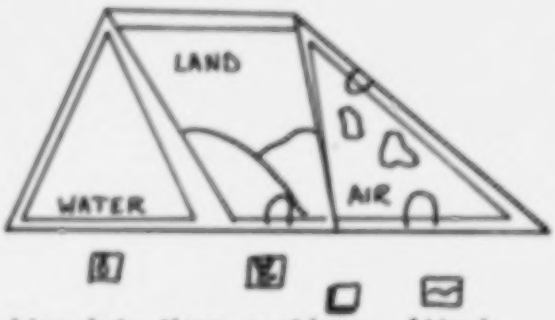
Classification, an activity we do almost daily in one way or another, helps us to order what we observe. It is basic to science and development of concepts.

An "Animal Theme" will provide many activities requiring classification. Classification, an activity in which all children can participate, should be a daily occurrence in all classrooms.

SORT FREELY

Provide a set of animal pictures or a collection of small plastic animals for children to sort. Allow children to sort freely and encourage them to tell you *why* they sorted as they did. Their explanations will give you many clues about what they learn, so listen carefully.

SORT BY A PICTURE



Fold oaktag into three sections. Attach a picture to each section. If you use paper clips, the pictures can be easily changed.

SORT BY A RULE

After many opportunities to sort freely, provide an oral rule for children to follow. Will some fit into more than one category? Disagreements should send your students scurrying to reference books or to observe an animal.

- Put all the animals with whiskers in one pile and all those without in another.
- Put all the animals that can dig in a pile, all the ones that can fly in another, and all the rest in another.

BRAINSTORM with your students for animals. As you brainstorm, place words or drawings on the board. Be sure you fill the board with children's suggestions. Copy the words or pictures on cards. Use the cards to sort into different categories. Make these cards very available to your students and you'll find they will make great use of them.

The questions on the following page are from Marlene McCracken to use in classification and brainstorming activities. Thanks Marlene!

Questions to ask children about animals...to develop thinking skills

WHICH OF THESE ANIMALS --

might be a good pet?
have horns?
have whiskers?
walk on two feet?
could be swimming in a pond?
could you pick up?
could feel soft?
might be soaring over the mountains?
have webbed feet?
have hooves?
might be walking in the jungle?
might be eating a nut?
might sleep in a large tree in the forest?
have no feet?
can climb a tree?
might be swimming in the ocean?
might slither?
could you hold in your hand?
would live in a nest?
could crawl up a flower stem?
have no teeth?
would be hunting at night?
could fit into a Volkswagon?

WHAT ANIMALS LIKE --

it cold?
it hot?

WHAT ANIMALS ARE --

pretty?
ugly?
very tall?
very small?
very fat?
very thin?
very strong?
very long?
can hop?
can crawl?
go nowhere at all?
have feelers?
have antlers or horns?
have hair?
have feathers?
have two feet?
have four feet?
have six feet?

WHAT ANIMALS: laugh gobble grunt growl squawk
sing whistle howl rattle talk etc.

have more than six feet?
have one foot?
have hundreds of feet?
have no feet?

WHAT ANIMALS --

like to live very high up?
like to live on steep mountains?
like to live deep deep down beneath the sea?
like it when it's wet?
like it when it's dry?
make houses out of grass?
make houses out of sticks?
make houses out of mud?
make houses out of silk?
make underground houses?
live in trees?

What animals drive?
What animals dig?
What animals burrow?
What animals slither?
What animals stay awake at night?
What animals hunt at night?
What animals sleep at night?

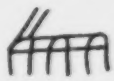
"Homes" by Ilo Orleans* is a great poem to use in your study of animals. Keep a list of animals and the numbers for their homes. Add to it as the year progresses. After you've found the names of more animal homes, use the structure of this poem for writing.

A _____ LIVES IN A _____;

A _____ LIVES IN A _____;

THIS IS ALSO AN EXCELLENT POEM FOR BUILDING IN THE POCKET CHART.

A LIVES IN A

A LIVES IN A 

USE PICTURES FOR YOUNGER CHILDREN.

HOME -- a great place to be!

Nest Builders

Mud, Wax, Paper Homes
paper wasp
honey bee
mud dauber

Underground Homes
prairie dogs
rabbits
ants

Homes That Move
hermit crab
garden snail
tortoise
kangaroo

Winter Homes

Burrowers
earthworm
mole
badger

River Homes

Questions to Explore

Where do animals build their homes?
Why do they build them where they do?
How do animals build their homes?
What materials are used?
Contrast the homes of wild animals with those of domestic animals.

BOOKS YOU'LL WANT TO USE

Animal Houses, Aileen Fisher

Who's in Rabbit's House, Verna Aardema

Rabbit Hill, Robert Lawson

Let's Look at Animal Homes, Cathy Kilpatrick

Best Little House, Aileen Fisher

* along with Ilo Orleans' poem also use poems - "Do You Know?" by Ethel Wegert; "About People Homes" by Mother Goose

ANIMALS IN THE CLASSROOM

Living animals in the classroom can be the source of many and varied learning experiences for children. However, before you bring live animals into the classroom, have some clear objectives in mind as to the learning possibilities. If you do not, very often the animal becomes merely a decoration in the room and extra work for you.

Children should handle live animals only if they are comfortable doing so. Be a good observer and you will have many clues as to how children feel. A pair of gardening gloves might make it easier for some children.

SOME CAUTIONS!

Check with parents concerning allergies. Some children are allergic to animal hair. Your classroom could become a very uncomfortable place for some students if they have an allergy.

Keep cages out of direct sunlight.

If the animal is teased, it will learn to bite.

Animals should not be dressed in clothing.

Do not hold animals by the tail. Demonstrate to children how the animal should be held.

TRY SOME OF THESE ACTIVITIES

Observe ears, teeth, tail, feet, etc. and then compare them to other animals.

Compare texture of whiskers with fur of the body.

Count the number of toes.

Find out how feathers, limbs, ears, tail and other body parts are placed on the body.

Compare size, shape, color, sound and movement to other animals of the same or different species.

Measure the animal at different times throughout the year. Keep a chart or graph.

Observe how toes, claws, nose, ears, etc. are used by the animal.

ANIMALS CAN BE USED TO. . .

model vocabulary

provide experiences for writing and talking

observe animal behaviors

give children classroom responsibilities

provide children with concrete experiences in measurement, observation, estimation, hypothesization and comparison

Provisioning the Classroom

MANY EXCELLENT ACTIVITIES DEALING WITH ANIMALS IN THE CLASSROOM CAN BE FOUND IN THE FOLLOWING BOOKS:

Science Experiences For The Early Childhood Years
Jean Durgin Harlan
Charles E. Merrill Publishing Co., Columbus, OH

Nature Activities For Early Childhood
Janet Nickelsburg
Addison-Wesley Pub. Co., Reading, MA

Discovering What Goldfish Do
Seymour Simon

Discovering What Gerbils Do
Seymour Simon

Small Pets From Woods and Fields
Margaret Buck

Be sure you place books about the animal throughout the room. Don't forget to make use of stories the children themselves have written.

Near the animal, place a magnifying glass for children to closely observe the fur, scales, eyes, etc. A stethoscope is also a fun item to have near the animal cage.

Place paper (lined and unlined), pencils, pens and crayons near the animal. Also, you might want to place the animal near the easel or water colors. You'll be surprised at the stories and pictures children will do on their own if you give them the opportunity. A scale, tape measure and ruler placed by an animal's cage will help to suggest to a child that measurement activities can be done with the animal. Encourage children to record their measurements. Do they always agree? If not, you have an excellent opportunity for some real problem solving experiences.

One of the main goals in our classrooms should be to give children meaningful reading experiences. Try doing the following activity in your room. Prepare some sentence strips (approx. 3" x 15"). Set these aside in a location where they can be easily obtained. When a child says something to you about the animal or you overhear a comment, record this on a sentence strip. Place the recorded comments near the animal. You will find children read these over and over. If you use the child's name along with the comment, the reading becomes very personal. Example:

Derrick said, "The rabbit's cage is smelly."

Change your signs often. It's a great opportunity to teach informally about quotation marks, question marks, capitals, etc. in meaningful situations.

Provide bulletin board space for children to share their stories and pictures about your classroom animal. Be sure stapler, pins or tape are within easy access for children to use.

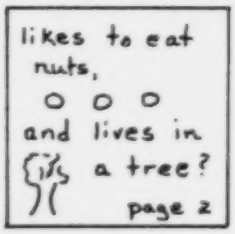
LET'S LOOK AT DOGS - Harriet E. Huntington
THE BEGINNING KNOWLEDGE BOOK OF BEES AND WASPS - Jay Heavilin
WILD ANIMALS - Denver Gillen; BIRDS ARE FLYING - J. Kaufmann
LET'S LOOK AT WILD ANIMALS - T. Rowland-Entwistle
WHEN BIRDS CHANGE THEIR FEATHERS - Roma Gans
MOUSEKIN'S WOODLAND SLEEPERS - Edna Miller
A WALK THROUGH THE WOODS - May Sarton
BIG ONES, LITTLE ONES - Tana Hobin
THE KID'S CAT BOOK - Tomie DePaola
HIDDEN ANIMALS - Millicent Selsam
WHAT IS BIG? - Bill Martin
SEABIRD - Holling C. Holling
FACTUAL
BOOKS
POEMS
STORIES
PETER RABBIT - Beatrix Potter
RABBIT HILL - Robert Lawson
CURIOUS GEORGE - H. A. Rey
FROG AND TOAD - Arnold Lobel
THE WIND IN THE WILLOWS - K. Grahame
THE LONGEST JOURNEY IN THE WORLD - Bill Martin, Jr.
INCH BY INCH - Leo Lionni
DO YOU WANT TO BE MY FRIEND? - Eric Carle
BROWN BEAR, BROWN BEAR - Bill Martin, Jr.
WHAT DO YOU DO WITH A KANGAROO? - Mercer Mayer
ROAR AND MORE - Karla Kuskin; PET SHOW - Ezra Jack Keats
HUNTER AND HIS HOG - Brian Wildsmith; THE NOISY BOOK - M. W. Brown
DID YOU EVER SEE? - Walter Einsel; ANIMALS AND THEIR BABIES - E. Carle
AN ARKFUL OF ANIMALS - William Cole
POEMS CHILDREN WILL SIT STILL FOR - Beatrice Schenk de Regniers
THE GOLDEN TREASURY OF POETRY - L. Untermeyer
THE PACK RAT'S DAY AND OTHER POEMS - J. Prelutsky
You'll find hundreds of other books in your libraries. Many public libraries allow teachers to take as many as 50 books at a time to use in their classrooms.
The public libraries also have prints of famous paintings and records you may be able to use.
Your local Teacher Center may also be able to help you.
These poetry books are filled with animal poems. Choose your favorite poems. Write them on charts, display them throughout your room, read them frequently with your children, use them as frames for writing, illustrate them using different mediums, and, of course, just ENJOY them.

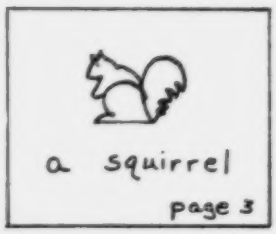
Some BOOKS you might want to use . . .

1) GUESS WHAT?

Roger Bester

This is an excellent book which will provide your class with a model for making their own "Guess What Book."





Pull out all of your nature magazines, use photos or have children make their own illustrations. Each child could do their own and then these could be combined in one class book. Or, use this idea for a riddle a day. Post your riddle on the door and have children write or draw their guess. A good activity to help children move into the rhythm of the day.

2) IF I WERE A CRICKET

Kazue Mizumura

"If I were a cricket, all through the autumn nights I would..."

Brainstorm with children about what animals would do during these autumn nights. Encourage them to observe and listen each evening to see if their ideas correspond with the animal's activity. The illustrations in this book are done with water color and crayon resist. Make materials available to students so that they can use these techniques to do their own illustrations.

3) THE LITTLE WOODEN FARMER

Eric Carle

This very easy and delightful story tells how a farmer and his wife acquire the animals they need. Have children act out the story with toy animals and blocks. It would also be a good story to use with puppets.

4) MAY I BRING A FRIEND?

Beatrice Schenk De Regniers

A king and queen issue an invitation to visit each day of the week. Their gracious invitation extends to giraffes, lions, hippos, monkeys and other animals.

5) THE GROUCHY LADYBUG

Eric Carle

This very entertaining book traces ladybug's journey from 5:00 a.m. to 6:00 p.m. Each page displays a clock to show the passage of time. Again, this book has a format that is easy for children to copy. Be sure to point out to the children how the size of the words are used to show the feeling of the various animals. Eric Carle uses tissue paper collage to illustrate this book. Teach this technique to your children and then encourage them to use it in illustrating their own stories.

6) GOBBLE, GROWL, GRUNT

Peter Spiers

They say there are over 600 animals identified in this book. They are according to family, habit or habitat. Each is identified by name and the sound it makes. How many of the animals can your students find? Is the sound chosen for each one the sound your students would have made for the animal?

7) OUR ANIMAL FRIENDS AT MAPLE HILL FARM

Alice and Martin Provensen

These authors describe many farm animals and their illustrations are delightful and very enjoyable. The book is filled with wonderful sounding words your students will both enjoy hearing and saying. I think you'll find your children reading this book in your listening center. Perhaps one of your classroom parents would be willing to make a tape of animal sounds for the classroom. Don't forget to play "The Farmer in the Dell" when you use this book. It's a natural with it.

8) AN INVITATION TO THE BUTTERFLY BALL - A COUNTING RHYME

Jane Yolen

This cumulative book can easily be adapted to use on the flannel board or pocket chart. Encourage your students to read the refrain with you. Write it on a chart or the chalkboard, making it easy for them to do so.

A B C BOOKS

Something for everyone! Not just for kindergarten.

Worried about children knowing their ABC's?

Are you spending valuable time in ABC drills, resulting in little learning taking place?

Is your main focus these beginning weeks on children learning the ABC's or that they are reading?

REMEMBER, CHILDREN LEARN BEST WHEN THEY ARE ACTIVELY ENGAGED WITH MATERIALS AND IN EXPERIENCES WHICH ARE MEANINGFUL TO THEM. SKILLS AND CONCEPTS ARE SELDOM LEARNED IN ISOLATION (ABC drills fall in this category).

Consider carefully WHY you teach the alphabet and the HOW and WHEN will follow.

THE ALPHABET IS NEEDED FOR:
- Spelling
- Alphabetizing activities
- Using the dictionary

NOT FOR:
- Beginning reading!

Teach the alphabet informally. As you take dictation, do brainstorming activities and then make your own alphabet books.

Use ABC books along with your animal theme. You'll be surprised at how much information is contained in them.

MORE ABC BOOKS:

ABC BUNNY
Wanda Gag

ALL BUTTERFLIES
Marcia Brown

CELESTINO PIATTI's
ANIMAL ABC

A PEACEABLE KINGDOM:
THE SHAKER ABCEDARIUS

ALL IN THE WOODLAND EARLY:
AN ABC BOOK
Jane Yolen

APE IN A CAPE
Frits Eichenberg

A BEASTLY ALPHABET
George Mendoza

Most of the animals in this book are a mixture of truth and invention. After enjoying this book with your students, have them invent their own animal. Use the structure of the book as a model for making your own class book.

APRICOT ABC
Miska Miles

Verse and pictures in this book take you off on a romp with the bees, birds and flowers. A beautiful and different kind of ABC book!

ALL ABOUT ARTHUR
(An Absolutely Absurd Ape)
Eric Carle

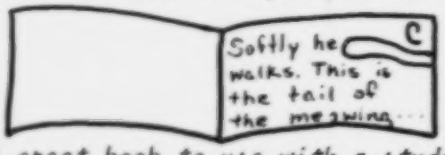
Arthur's problem leads him from city to city, friend to friend and from A to Z.

HOSIES' ALPHABET
Leonard Baskin

Enjoy the beautiful pictures in this Caldecott honor book with your students.

THE ALPHABET TALE
Jan Garten

This is an excellent book to use as a frame for children writing their own. Here's a sample to get you started.



A great book to use with a study about tails!

Read this book for the sheer enjoyment of it! Second and third grade children will enjoy hearing you read this story about a beautiful friendship. Reading it by chapters will probably take you a couple of weeks. You will find that the children's interest in the story and characters can lead to many exciting learning experiences. Besides observing and listening to children, try to anticipate some of their interests and questions so that you can gather materials and provision the classroom effectively.

CHARLOTTE'S WEB

E. B. White

Walks

- Many children have never seen a baby pig up close. If at all possible, some time this year, provide your children with this experience.

- Look for spider webs. Make a collection of them for your bulletin board.

- Examine spider webs at different times of day and after a rain or heavy dew.

- Look for spiders. Bring some back to the classroom for further examination and observation.

- Look around the school. Can any spider webs be found inside? Are they the same as the ones found outside?

- Examine barns in your area. Are they like the one described in the book? One of my greatest pleasures driving across the country is to see the many and varied types of barns. Don't leave your children thinking the word for barn means only the one type found in books.

- Visit a barn. A farmer in your area might enjoy having your students visit.

- Don't forget to take along a CAMERA to record some of your walks. Place the pictures in an album (have the kids make one) and then have the children write or dictate information concerning the pictures. If you put this book where children will have access to it, you'll find it is one of their favorite books. Also, it will be handy to have when parents and principals ask what you are doing in the classroom.

Read this book to yourself first to pull out vocabulary which will need explaining to your students. Try to provide them with concrete experiences, rather than just telling them.

Have your children catch some spiders. Provide them with a magnifying glass. You may want to make a large chart with your children showing the parts of a spider.

WATCH A SPIDER SPIN A WEB.

E. B. White provides a lot of information about spiders in his book. As you read, record this information on the chart. What further information can your children find?

This story speaks to the senses of all of us (see Chapter III description of the barn). Bring in some hay for children to smell and feel. Encourage them to use all of their senses on the walks you take with them.

LOOK FOR PICTURES OF SPIDERS AND WEBS IN MAGAZINES AND BOOKS.

OTHER BOOKS BY E. B. WHITE:

Stuart Little

The Trumpet of the Swan

DISPLAY THEM IN YOUR ROOM.

Compare the fair in the story with one held in your community.

MEASURE WEBS. WHAT IS THE LARGEST, SMALLEST ONE THAT CAN BE FOUND? RECORD YOUR INFORMATION ON CHARTS:

"Sara found a web 4" across."

Make a collection of spider facts. Here's one to get you started: one strand of spider silk is stronger in proportion to size and weight than the finest steel!

One second grade I know made a giant web of string in their classroom. It held children's designed spiders and their stories about spiders and CHARLOTTE'S WEB.

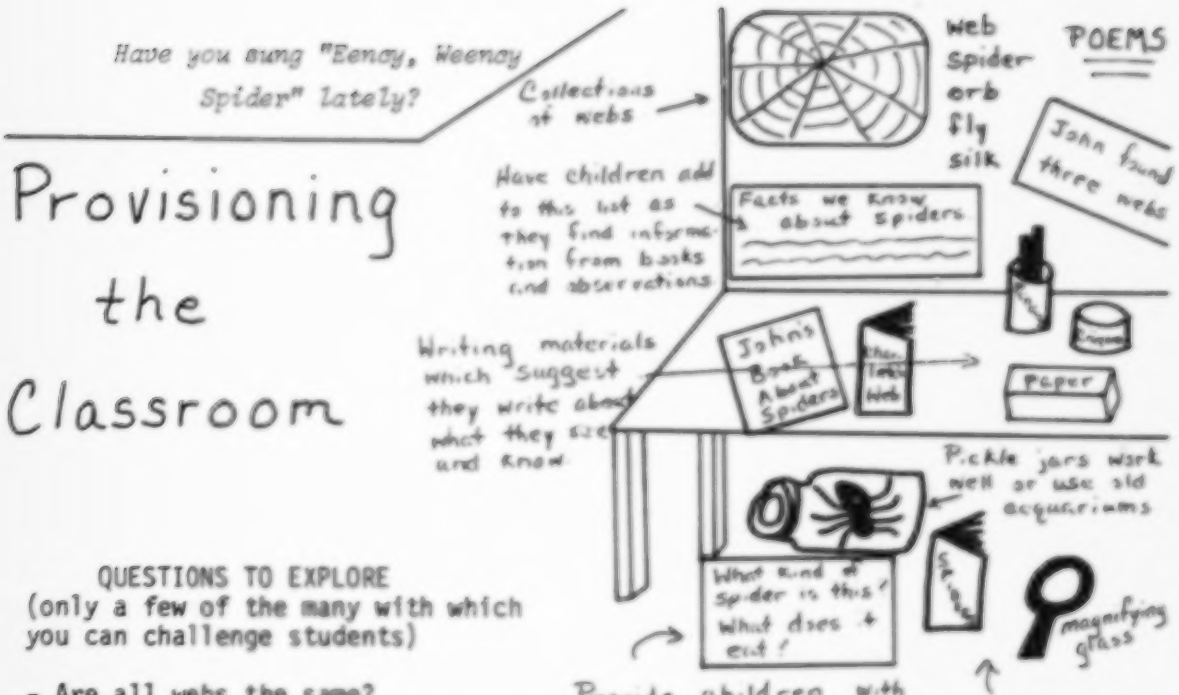
Lots of mothers and babies are mentioned in this story. Make a collection of names for mothers and babies.

You might also want to use Big Ones Little Ones by Tana Hoban. This wordless book shows photos of baby animals and their mothers.

Make a large picture of the Zuckerman's barnyard. If it's large enough, many children can work on it. Hang it in your hallway.

How does a pig's tail compare with that of other animals? Begin a study of tails.

Provisioning the Classroom


Have you sung "Eency, Weency Spider" lately?
Collections of webs
web
spider
orb
fly
silk
POEMS
John found three webs
Have children add to this list as they find information from books and observations
Facts we know about spiders
Writing materials which suggest they write about what they see and know
John's Book About Spiders
Paper
Pickle jars work well or use old aquariums
What kind of spider is this? What does it eat?
magnifying glass
Provide children with questions which will lead them into further learning.
Make use of space below the table.

QUESTIONS TO EXPLORE
(only a few of the many with which you can challenge students)

- Are all webs the same?
- Do all spiders spin webs?
- Are two spider webs ever exactly the same?
- How many different kinds of webs can be found?
- What happens to a web when it rains?
- How strong is a web?
- Where can webs be found?
- What are webs made of?
- How do spiders look alike?
- How is a spider different from a bee or an ant?
- Is a spider an insect?
- Are spiders harmful or helpful to man?
- What do spiders eat?
- How much does a spider eat in one day?
- If a spider web could be unwound, how long would it be?
- How does a spider feel?
- Are all spiders the same size?

Don't worry if you think you don't know the answer to the above questions. You and your students can learn together. Some you may never find the answer for. They are valuable only when you use them to enhance and extend learning.

Books

SPIDERS, Ramona Stewart Dupre, Follett Beginning Science Book

SPIDERS, Macdonald First Library

SPIDER SILK, Augusta Golden

SPIDERS, Ralph Whitlock (for older students, but has some good photos younger children might enjoy)

Poems

LITTLE MISS MUFFETT, Mother Goose

SPIDER WEB, Aileen Fisher

SKY RIDER, Aileen Fisher

Collecting Spider Webs

Beautiful additions to your art display?

1. First locate some webs. This might be something your students can do on walks or going to and from school. How about encouraging them to do it during recess or lunch? Look for webs that are not too big or badly damaged.

2. Gather your materials. You need a can of white spray paint, black paper and a can of clear enamel.

3. With a small group of children to help, you're ready to collect your web.

   A) Find all the "guy wires" which anchor the web to solid objects.
   B) Carefully brush off the spider. It will spin a web some place else.
   C) Spray the web <u>carefully</u> several times with paint.
   D) Slip a piece of black paper behind the web. Be sure you do not break the "guy wires" which anchor it. Gently ease the paper up against the web. (An extra pair of hands is helpful at this point.)
   E) Press the guy wires to the edge of the paper. The web is now anchored to the paper.
   F) After the paint is dry, spray the picture with clear enamel.

CONSTRUCTING A MODEL

Perhaps some of the children might like to build the barn where Charlotte and Wilbur lived. As the story unfolds, children will be adding to and changing their creations or they may want to wait until they have heard all descriptions of the barn. There are many areas of the room which will support this activity. Be sure to leave the book out.

BLOCKS: If you have rubber or plastic animals of the characters from the story, place them with the blocks. You might leave out some of the animals suggesting to the children (a question on a card near the blocks would be one way) that they might find a way to make the animal.

WOODWORKING: Provide children with some soft lumber and any other materials they would need to build the barn.

ART: Place heavy cardboard, small pieces of wood, straw, etc. in this area. A cardboard barn works just as well as a wooden one. Some children might also enjoy making peep boxes or dioramas. Cut a small hole in the side of a box (shoe boxes work well). Build a scene inside the box and then place on the lid. Look through the hole at the scene inside.

PUPPETS

Make or obtain puppets of Charlotte and the other characters from the story. Place them where children will have access to them. Observe what takes place.

OTHER BOOKS YOU CAN DEVELOP:

Minn of the Mississippi, Holling Clancy Holling
Rabbit Hill, Robert Lawson
Frog and Toad Are Friends, Arnold Lobel

ANIMALS: IMAGINARY & RIDICULOUS

DRAGONS:

Brainstorm for:

- **how dragons look**
- **where they live**
- **what they can do**

Record the brainstormed vocabulary on cards to use in writing, drama and classification

Once upon a time,
there lived a _____
dragon named _____.
He (She) lived in _____
and spent his (her) days
(nights) _____.

Use the above cloze to begin your children writing about dragons. Once you have done some brainstorming with children, they will have lots of ideas to fill in the blanks.

Be sure to read the poems "The Gold Tinted Dragon" by Karla Kuskin and "Custard the Dragon" by Ogden Nash

REMEMBER:

Before expecting children to do writing, be sure to expose them to a great many poems and books about dragons. Immerse them in language and structures, making it easy for them to write and tell about dragons.

HAVE A DRAGON HUNT

Take your children to the library. Let them hunt for books about dragons (or other monsters) to bring back to your classroom. Place the books in various places around the room.

From October 1980 Notes to Fort Yates Follow Through Staff.

THE TEARS OF THE DRAGON

Hirosuke Hamada
illustrated by Chihiro Iwasaki

This is a beautiful book which tells the story of how a small boy transforms a frightening dragon into a happy dragon boat for the pleasure of his village.

Eastern tradition holds that only a saint is powerful enough to control a dragon. Is it perhaps Akito's love and understanding that make him powerful enough to do so? A good topic for class discussion.

Find Japan, the home of the author and the illustrator, on a map or globe.

Akito wants to invite the dragon to his birthday celebration. Fantasize with your students for a few minutes. Who would they like to invite to a birthday celebration?

★ ○ ★ ○ ★ ○

Make a Dragon Land board game so that your students can practice . . .

- *counting*
- *colors*
- *addition/subtraction facts*
- *spelling*

MAP STUDIES

What better way to study about maps than by making one? Invent a mythical country complete with dragons, castles and brave knights. Now have your students make maps showing the locations of everyone and everything in the country. IMAGINATION is the goal.

TISSUE COLLAGE

The tissue collage technique is marvelous for making dragons. Obtain various shades of green tissue paper. Tear it into small pieces. Place a small amount of liquid starch in a container along with a brush. Brush some starch on a paper and place pieces of tissue on it. Brush over the tissue. Fill up a space large enough to draw the dragon. When the tissue collage is dry, draw the outline and details of the dragon with a magic marker. Cut out. Use in a mural or just fill your room with dragons.

* * * * * * * *

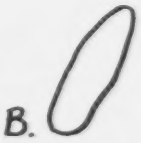
Some excellent books you will want to place in your art center (why not try them yourself???) are the books by John Hawkinson. These books show children (and adults that have an interest) how to do watercolor painting. Compare his birds and flowers with those painted by Chihiro Iwasaki in The Tears of the Dragon.

* * * * * * * *

DRAGON PUPPETS

From a sock

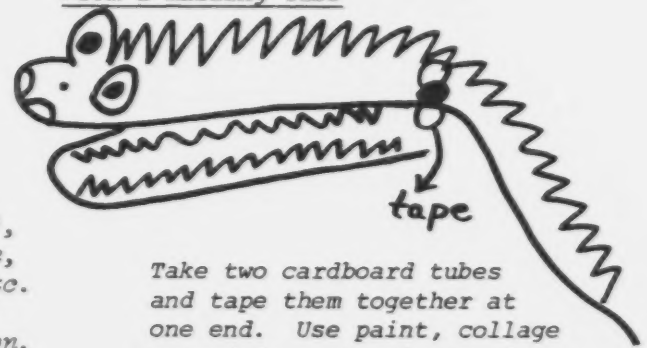
Cut the toe of a sock as in Figure A.



Cut a piece of red felt or cloth.

Sew the red felt to the sock to form the mouth.

From a mailing tube



Take two cardboard tubes and tape them together at one end. Use paint, collage materials, natural materials to design your dragon.

Add eyes (buttons, seed pods), paper nose, scales, etc. to finish your dragon.

MONSTERS come in all Shapes & Sizes

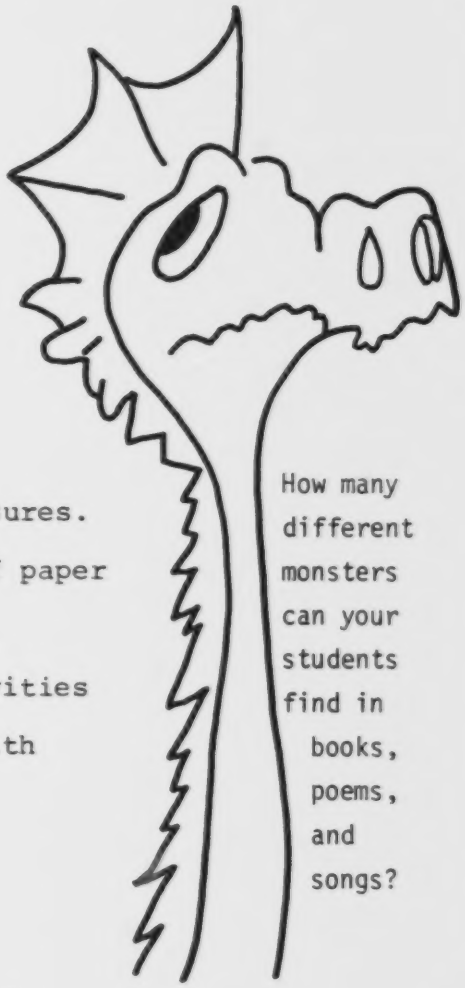
Put all those wonderful monster words on string lists and hang those lists in your classroom. FILL YOUR ROOM WITH LANGUAGE!

Give your students large sheets of paper and have them fill their paper with the shape of a monster, paint or color it and cut it out. Now use your monsters for some math activities. . .

Which ones are the same size?
Which ones are the widest, thinnest?
Which ones are shorter than you?
Which ones are taller than the shortest child in your room?
Which ones are shorter than the tallest child in your room?

Measure in both metric and standard measures. Then give your children a small piece of paper and have them make a small monster. You'll be able to extend the above activities much further if you furnish your room with

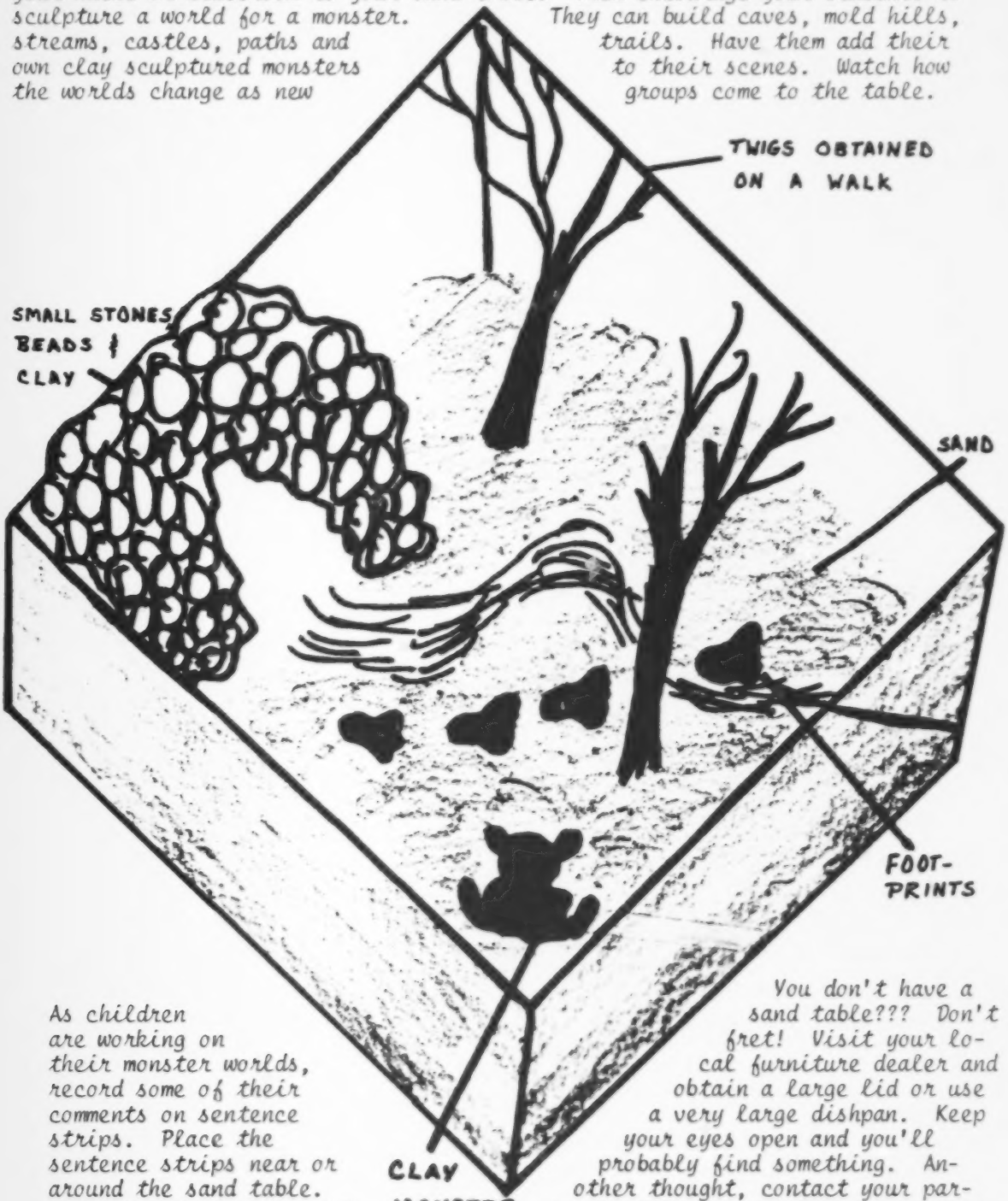
tape measures
all sizes and types of rulers
meter sticks
sliding rules



How many different monsters can your students find in books, poems, and songs?

Build a monster's world in your sand table

Add twigs, stones, moss, clay, small blocks and other things collected from your walks or classroom to your sand table. Then encourage your students to sculpture a world for a monster. They can build caves, mold hills, streams, castles, paths and trails. Have them add their own clay sculptured monsters to their scenes. Watch how the worlds change as new groups come to the table.



As children are working on their monster worlds, record some of their comments on sentence strips. Place the sentence strips near or around the sand table. Read them frequently with your students.

You don't have a sand table??? Don't fret! Visit your local furniture dealer and obtain a large lid or use a very large dishpan. Keep your eyes open and you'll probably find something. Another thought, contact your parents. Perhaps some have some scrap lumber and can build you one.

MONSTER MOVES

LOOKING FOR A GOOD P.E. ACTIVITY? TAKE YOUR KIDS TO THE GYM, OR IF IT'S A NICE DAY, TO THE PLAYGROUND WHERE THEY WILL HAVE LOTS OF ROOM TO MAKE

- *large, spiky movements*
- *their bodies into curves and points*
- *crawling, stalking, creeping, slithering movements*
- *leaping, jumping, sliding movements*

HAVE CHILDREN WORK IN SMALL GROUPS TO MAKE A MANY-LEGGED MONSTER. GIVE THEM TIME TO PRACTICE AND THEN HAVE THEM DEMONSTRATE FOR THE REST OF THE CLASS.

IF YOU'RE LUCKY ENOUGH TO HAVE A P.E. TEACHER, ASK HER/HIM TO DEVELOP A LESSON. S/HE CAN DIRECT THE MOVEMENT ACTIVITIES, WHILE YOU WORK WITH HER/HIM DEVELOPING THE LANGUAGE. IT WOULD BE A GREAT TIME TO DO SOME LANGUAGE MODELING.

MASKS MASKS MASKS

OF COURSE, YOU'RE PLANNING ON HAVING YOUR CHILDREN MAKE MASKS! BUT SINCE YOU HAVE SUCH A GREAT MONSTER THEME GOING, WHY NOT HAVE THEM MAKE THEIR FAVORITE MONSTER. THEY MIGHT CHOOSE FROM A POEM, A BOOK OR DESIGN THEIR OWN. MAKE YOUR MASKS FROM CARDBOARD , PAPER BAGS OR PLATES . BRING OUT ALL YOUR SCRAPS OF YARN, CLOTH, NATURAL OBJECTS COLLECTED FROM WALKS TO GIVE KIDS LOTS OF OPTIONS.

Drama Corner

Does your classroom have a dress-up corner? Usually we think of this as being a kindergarten activity, but it can be a valuable asset in any classroom. When you're cleaning out your closet or going to rummage sales, try to find items that would make good additions to your corner.

hats puppets old jewelry coats an old sheet feathers

PUPPETS

What better time to have children design and make their own puppets. Ask parents to send in some old socks to be used for puppets. Give your students needle, thread, buttons, sequins, cloth scraps, yarn and a sock. Then sit back and observe the creations take shape. Also observe the many skills children need for such a project. You may be very surprised at how difficult sewing on a button is for some children. These are skills, however, which we use daily and children need many opportunities to practice.

FILL YOUR ROOM WITH BOOKS

There's No Such Thing As A Dragon
Jack Kent

Billy Bixbee finds a small dragon in his bedroom, but his mother says, "There's no such thing." As everyone tries to pretend it isn't there, it grows and grows and grows.

The Beast of Monsieur Racine
Tomi Ungerer

Monsieur Racine finds a strange beast and soon they become the best of friends. Children will enjoy the surprise ending in this story.

A Good Knight for Dragons
Roger Bradfield

Sir Cedric was sent out to hunt the newest dragon terrorizing the kingdom. Children will enjoy the turn of events in this story.

Santaberry and the Snard
Alice & Joel Schick

Although this is a Christmas story, children will enjoy it along with your monster theme.

Sebastian and the Dragon
Violet Morgan

Sebastian makes friends with a winged dragon and together they rid the town of a loafer. Third graders, I think, will especially enjoy the black and white illustrations in this book.

The Great Green Turkey Creek Monster
James Flora

My third grade friend, Eric, assures me this is a funny book. I'm sure your children will enjoy it as well.

The Tailypo
Joanna Galdone

A scary story similar to The Teeny, Tiny Woman in Sounds After Dark by Bill Martin Jr. Compare the two versions. Children could also compare the art work in the two books.

Crictor
Tomi Ungerer

A baby boa constrictor grows to be an affectionate and lovable pet. He's a great friend of children and can do wonderful things with his body. Be sure to use Shel Silverstein's poem "Boa Constrictor" with this book.

Where the Wild Things Are
Maurice Sendak

A favorite with all children. Compare Sendak's monsters with those in some of the other books.

DRAGONS ARE AN IMPORTANT ELEMENT IN CHINESE LITERATURE. THEY ARE OFTEN GREAT AND KINDLY BEINGS CLOSELY CONNECTED WITH SKY, CLOUDS, STORMS AND RAINS.

The Chinese Emperor sat on a dragon throne. Can your students find out why?

Can students find out when the next year of the dragon will be?

Find out more about Chinese dragons by reading Chinese Fairy Tales. If your library has Fairy Tales of China by Peter Lum, you will be well on your way to enjoying a new group of fairy tales.

My brother once brought me a dragon from Japan made of colored wire. Remembering this wonderful piece of "sculpture" I began to think of the pieces of colored wire one can get from the Telephone Company. Try to get some of this, build a form from tubes, newspaper, or wood and then begin wrapping the wires around it. I have a feeling your students could make dragons as wonderful as the one my brother brought me.

"JABBERWOCKY"
Lewis Carroll

This is a great nonsense poem, so don't expect to find much meaning in it. It's a natural to use along with a dragon theme. Most of the words are two different words put together. Your students might enjoy trying to figure out what the two words are that make up the nonsense word.

Mr. Drackle and His Dragons
Elizabeth Hull Froman

Mr. Drackle, an ogre, raises two dragons as pets over the objections of his neighbors.

The Hungry Thing
Jan Slepian and Ann Seidler

Make up your own food and riddles for the Hungry Thing.

Magic In The Mist
Margaret Mary Kimmel

A boy studies to become a wizard. One day he finds a dragon. . .

Kickle Snifters and Other Fearsome Critters
Alvin Schwartz

All of these fearsome critters have been taken from American folklore.

The Wonderful Dragon of Timlin
Tomie DePaola

Point out to the children how Tomie DePaola uses a bubble to tell a story within a story (pages 5 & 6).

King Krakus And The Dragon
Janina Domanska

The people of Krakow are terrified by a dragon until the shoemaker's apprentice devises a plan to rid the town of the monster. Look for Krakow on a map. How does the dragon in this book compare with those in some of the other books?

Lester and the Sea Monster
Jan Slepian & Ann Seidler

A sea monster lures ships to crash on the rocks.

Cyrus the Unsinkable Sea Serpent
Bill Peet

A hilarious series of adventures pits Cyrus against a pirate ship.

Pea Soup and Sea Serpents
William Schroder

Two young boys set off to find a sea serpent, but are foiled by the fog. Be sure to share this book with a very small group of children, as the illustrations are an important part of the enjoyment of this delightful story.

Nessie the Monster
Ted Hughes

A tale about the Loch Ness monster of Scotland. Are there any monster legends in your area? If so, compare them with this tale.

Dragons, Unicorns and Other Magical Beasts
Robin Palmen

A dictionary of fabulous creatures with old tales and verses.

The Ice Cream Cone Coot and Other Rare Birds
Arnold Lobel

Give each student a cone and let them each build a "rare" bird of their own. Use pipe cleaners, buttons, foil, tissue, tongue depressors, etc.

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THE BUNYIP OF BERKELY'S CREEK
JENNY WAGNER

A STRANGE CREATURE EMERGES FROM THE BOTTOM OF BERKELY'S CREEK AND SETS OFF TO FIND OUT WHAT HE IS.

The Magical Drawings of Moony B. Finch
David McPhaill

Monsters, Ghoulies, and Creepy Creatures
Lee Bennett Hopkins

After using this book in your room, encourage your children to write, illustrate, act out and share their ideas that this marvelous book will generate.

The Gunniwolf
Wilhelmina Harper

This book also has a refrain which encourages children to actively participate in the story. It's a great one to use during those few minutes you're waiting in line for the bell to ring.

The Mystery Beast of Ostergeest
Steven Kellogg

If nothing else, your students will enjoy the delightful and amusing illustrations by Steven Kellogg. Use this book along with the poem "The Blind Men and the Elephant" by John Godfrey Saxe. Children will enjoy the fact that a small boy was the one who knew what the mystery beast was.

TALKING ANIMALS

This month my notes are featuring "Talking Animals" found in fairy tales. I hope all of you are using fairy tales throughout the year. Often fairy tales are related to kindergartens and first grades. However, there are good reasons for using them with every age group.

Fairy tales are good stories. They

- appeal to children's sense of justice
- help to lay the groundwork for understanding all literature
- kindle imagination
- are found in every culture

You will find many more stories than I have listed in my notes. Remember, I am only providing you with an outline and some suggestions to get you started. All of the techniques and ideas can be used to fit any story; feel free to copy, adapt and add to anything you find in these notes. Choose stories you can get excited about and your enthusiasm and excitement will spill over to your children. Have confidence in your own ideas and creativity and enjoy the stories with your students.

Roxanne

From November/December 1980 Notes to Fort Yates Follow Through Staff.

Begin a chart of beginnings and endings of fairy tales. As new ones are found, have your students record them on the chart. Encourage them to use them in their writing. Here are some to get you started.

BEGINNINGS	ENDINGS
We do not really mean that what we are about to say is true.	This is my story which I have related. If it be sweet, or if it be not sweet, take some elsewhere, and let some come back to me.
A story, a story; let it come, let it go.	
Once upon a time. . .	And so they lived happily ever after.

Compare versions of the same story. Are they always the same? How are the illustrations done in the various versions? How would your students illustrate the story? Would they like a different ending?

Use the structure of fairy tales to write seasonal stories. Brainstorm with your students for situations that would involve turkeys, Santa, reindeer, elves, toys, etc. Do some more brainstorming for villains and settings. Make use of your charts for beginnings and endings, etc.

• • • • •

What records and/or filmstrips of fairy tales can you put in your classroom for children to use independently? If you don't have access to any, have a cassette making party. Invite some friends to take the parts of story characters and with their help record the story. You provide the food and drinks. Or older children could make some cassettes for younger students. Put book and cassette in your listening center.

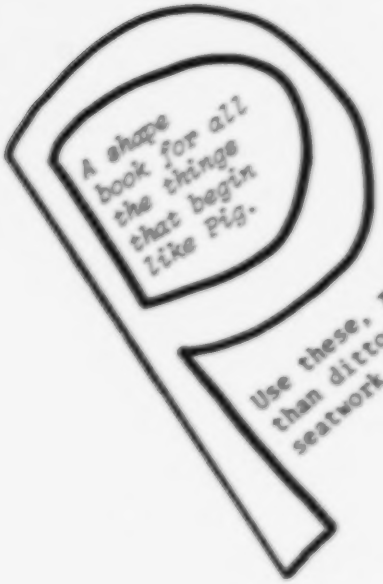
Fill Your Room With FAIRY TALES

Read a great many and read them often so that the structure becomes a part of your children's literary storehouse.

- *Time and place are quickly established.*
- *The plot structure is simple and direct.*
- *There is repetition.*
- *Frequently has the number 3.*
- *Characters are stereotyped.*
- *The setting is often undefined.*
- *The ending is brief.*

Have your students search the tales to find villains, heroines and heroes. This might generate some lively discussions as they decide where the characters will be placed. Some interesting graphing activities might also result.

VILLAINS	HEROINES	HEROES
wolf-Red Riding Hood fox-Henny Penny	Cinderella	woodcutter pig



QUESTIONS TO THINK ABOUT

What do pigs eat?

How much can a pig weigh?

What do pigs' feet look like?

If I touch a pig, what would it feel like?

Does a pig have fur?

What products do we get from a pig?

Are there any other stories that have pigs in them?

How fast can a pig move?

Does a pig have little or big eyes?

When children write, are you finding opportunities for them to share their stories with each other?

a number book

Use old catalogs, newspapers and magazines to find pictures for your books.

Bring out those individual chalkboards and use these patterns for dictation. You'll find many more words in fairy tales that you can use for spelling patterns.

Puff		Pig	Stick
huff	rough	wig	brick
muff	tough	big	hick
buff	enough	fig	Dick
cuff		dig	kick
fluff		whig	lick
stuff		brig	Nick
gruff		gig	pick
bluff		jig	Rick
		rig	tick
			crick
			prick
			slick

CHILDREN STAPLE A NUMBER OF SMALL PIECES OF PAPER TO A LARGER CARD. A SENTENCE FRAME IS WRITTEN ON THE CARD, I.E., A _____ IS PRETTY. PICTURES OR WORDS ARE WRITTEN ON THE SMALL PAPERS. AS EACH SMALL PAPER IS FLIPPED UP, A NEW SENTENCE CAN BE READ.

	(use pictures for young ones)	
A	WOLF	IS SCARY.

MAKING INFERENCES -- MAPPING

Have you ever thought of using Fairy Tales to teach mapping skills? Second and third grade teachers, your students might find this a fun project. They will be practicing a lot of skills you have been teaching, including the skill of inferencing, as the path that various characters take in the stories is not already stated. Do one <u>with</u> them first.

1) *Reread the story, keeping in mind you will be transferring the movement of the characters to paper.*

2) *Give each of them a large piece of scrap paper. (You will get better results if children know this is their scratch paper and they will be redoing it on good paper later. Remember, at this stage, the goal is on learning, not on neatness!).*

3) *Pose some questions. Here are some for "The Three Little Pigs," as an example.*

   - *Where are the houses of the three little pigs located? Are they all in the same location?*

   - *Locate the apple orchard, fair and turnip field. Do they all lie in the same direction? Will they all be equidistant from the little pig's house? Remember the little pig did not have enough time when he went to the apple orchard.*

   - *Are there roads, hills, mountains, lakes, etc.?*

   - *Did the wolf have a home somewhere?*

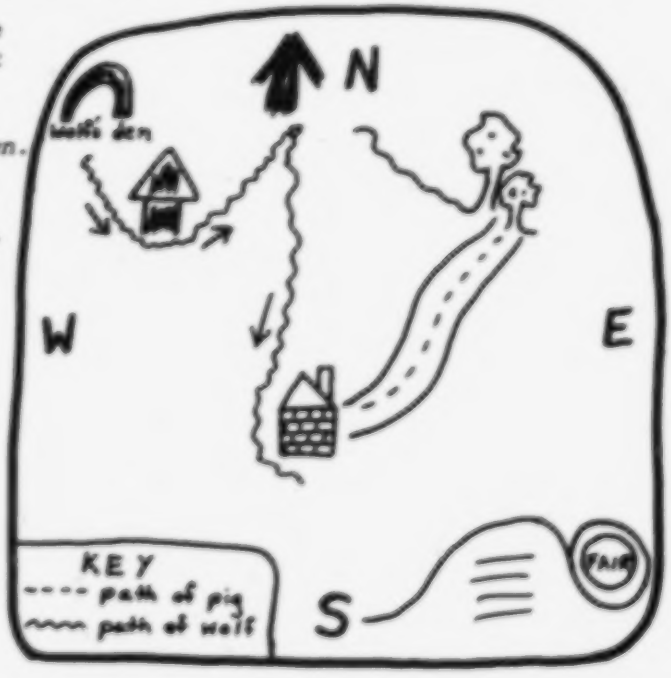
4) *Show the travels of the characters with dash lines or other symbols.*

5) *Reread the story and move a finger, or paper cutout of the character, along the pathway to make sure nothing has been forgotten.*

6) *Place symbols on the map for directions, roadways, etc.*

7) *Label the map with the title of the story.*

8) *Transfer the map to good paper using markers, crayons and pencil.*



(continued on next page)

MAKING INFERENCES -- MAPPING (cont.)

Be sure to give children enough time to do this well. When they do their copy of the map, they will want to do their best writing, drawing and coloring. This all takes time, but they will be learning and practicing many skills. Display your completed maps for others to enjoy. Once children know how to go about doing this, encourage them to do other stories. It might be a traditional tale or a more modern one, such as Peter Rabbit by Beatrix Potter.

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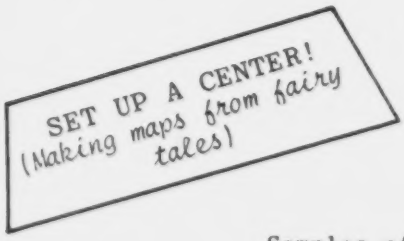


Questions To Help Them

Who?

Landscape features?

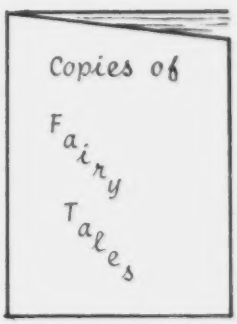
hills
caves
houses
rivers

Where did they travel?

Samples of all kinds of maps:

road maps
globe
world maps
U.S. map

PAPER



Take time each day to offer help, if they need it.

A good seatwork activity! (better than 10 ditto or workbook pages)

A Storytelling Tip

After you have read or told a story to children, stop and give them a few minutes of silence to savor and absorb the story. Then ask them to draw or write about the story. You will get better results because children will have had some time to reflect on the story.

DEVELOPING A SETTING

Have children make murals of their favorite Fairy Tales. Deciding on the type of setting for the story will generate a lot of discussion and children will have to make inferences, as the setting in fairy tales is almost always undefined. If you're looking for something different, have your children make their mural into a hanging using an inexpensive piece of cloth and scraps of felt or cloth. Hang your hanging where it will be enjoyed by many people. Be sure to add a written version of the story, so that people will both be reading and looking.

THE THREE LITTLE PIGS

DEVELOPING AND EXTENDING THE STORY

SEQUENCING

1) Use chants on sentence strips, cut apart and resequence in correct order. (see box on next page)

2) Fairy tales are a natural to use in sequencing activities.

   - Use pictures or the story written on cards/sentence strips and have children place them in sequence.
   - Have children fold a paper in fourths, using both sides of the paper. They draw or write the eight main parts of the story.
   - Furnish your classroom with a flannelboard and the characters from the story. Children can use the materials to retell the story.

3)

3RD LITTLE PIG	WOLF
left home	*huffed and puffed*
built a house of bricks	*tried to trick the pig*
rolled down the hill in a churn	*ran after an apple*
bought a butter churn	*became very angry*
asked a man for bricks	*climbed up on a roof*
	came to the brick house at 6:00

Prepare a stack of sentence strips and two cards, one saying "Third Little Pig" and one that says "Wolf." Place the cards in the pocket chart. Now BRAINSTORM for what these two characters said and did. As children give their ideas, write these on the sentence strips and place them in the pocket chart. Be sure to have the children read each phrase with you. When you have all of the strips prepared, take them out of the chart and have the children work in groups putting strips in correct sequence. Then put the strips out for children to use in their free time.

Second and third grade teachers: If you have students who are non-readers or have a lot of difficulty with reading, try going back to your fairy tales and developing them in some of the ways outlined on these pages, rather than always going back to pre-primers. Once children have gained some self confidence about their reading, then you can go back to the basal.

1. Read the story as many times as necessary to familiarize the children with the structure and the language of the story. Encourage children to chant repeated parts with you.

2. Reread or retell the story using sentence strips and your pocket chart.

Please, man, will you give me some of those sticks so

I can build myself a house to live in?

Little pig, little pig, let me come in.

No, no, by the hair of my chinny chin chin.

Then I'll huff and I'll puff, and I'll blow your house in.

As you point to the words, have the children read them with you.

3. When children are familiar with the words, make a second set of sentence strips. Cut the words on these strips apart.

Little	*pig*	,	*little*	*pig*	,	*let*	*me*	*come*	*in*	.

Children can match the words to the original strips by placing the words on top of the original strips, or take the words and rebuild them to form the chant. A check with the original will show if they are correct or not. It's a great way to put into practice lots of reading skills: matching, same/different, sequencing, phonics. Don't forget to make cards for the commas and periods. Also a good seatwork activity!

A N I D E A W O R T H S H A R I N G

One teacher developed a Number 3 bulletin board WITH her children. They brainstormed for all the stories and nursery rhymes which had the number three in them. Pictures of the characters were placed on the board. Later cards with the name of the story or nursery rhyme were placed by the characters. These could be easily removed and allowed children to match the character and story. As they found new stories, these were added to their bulletin board. Children became very aware of the number three and looked for stories to add to their collection.

Who's afraid of the big bad wolf?

Let older students develop this story into a play and present it for another class. A kindergarten would really enjoy a good production of this story. Or kindergarten teachers, help your students to present this as a play for older students.

Tell this story with puppets.

COMPARE VERSIONS

A WOLF has	A PIG has
4 legs a long tail	4 legs a short, curly tail

How many other things can be added to this list?

WHAT OTHER ANIMALS COULD ONE BE AFRAID OF?

WHAT OTHER WAYS MIGHT THE WOLF USE TO TEAR DOWN THE PIG'S HOUSE?

HOW ARE A WOLF AND PIG THE SAME/DIFFERENT?

HOW MANY OTHER WAYS CAN YOUR CHILDREN THINK OF TO OUTWIT THE WOLF?

HOW MANY WAYS CAN YOUR STUDENTS FIND TO DESCRIBE THE WOLF AND PIGS. A GOOD BRAINSTORMING ACTIVITY.

REMEMBER

Things happen in threes.

Three is a trickster.

Repetition is a part of the story.

WRITE A SEASONAL STORY. . . (The story of the "Three Little Pigs" provides the structure.)

BRAINSTORM

DO A CLASS ONE FIRST

OLDER STUDENTS WORKING IN GROUPS COULD DEVELOP THEIR OWN.

Pumpkins trying to escape being made into a pie.

Turkeys escaping the farmer's axe.

Geese outwitting a hunter,

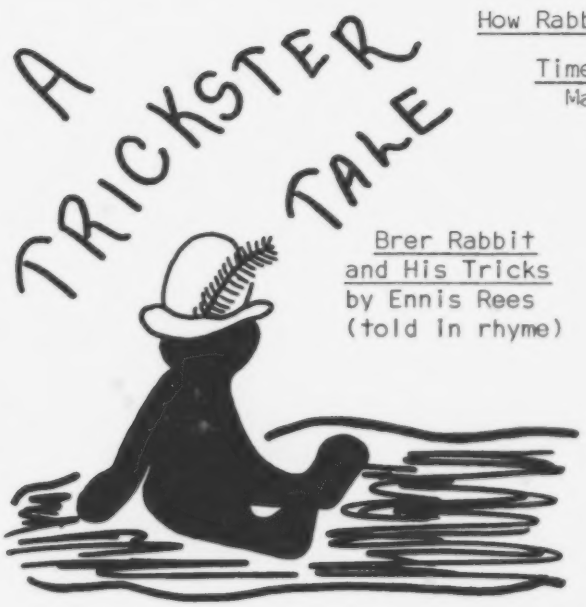
or reverse the escape attempts to. . .

Rejected toys getting Santa to choose them.

Reindeer becoming a member of Santa's team.

Elves presenting new toys to Santa.

BIND YOUR STORIES INTO BOOKS AND PUT THEM ON A SHELF FOR EVERYONE TO ENJOY.



How Rabbit Tricked His Friends--Mieko Maeda

Time for Fairy Tales Old and New
May Hill Arbuthnot © 1961 Pg. 216

The "Brer Rabbit" stories, as recorded by Joel Chandler Harris, are almost unknown to our children because many of them are written in a difficult-to-read dialect. However, a number of versions have now been written in a more standard English. These stories, originally from Africa, have delighted children all over the world (one person has found over 200 versions of the "Tar Baby" story) and are part of the folk telling traditions of the United States. Make sure your children are exposed to this rich collection of tales.

A STORY A STORY

by Gail E. Haley

This 1971 Caldecott winner tells how Ananse, the Spider Man, brought stories to earth. Encourage your students to use some African story telling techniques in their own writing.

1) ideophones - for example, "Twe, twe, twe, chuckled the Sky God."
2) repeating words and phrases - "It is raining, raining, raining," meaning it is raining very hard, to make them sound stronger.

How many examples of these techniques can your students find in the story? Who's In Rabbit's House? by Verna Aardema, another African story using ideophones, would be a good addition to your classroom library of talking animal books. Be sure to add the beginning and ending phrases found in A Story A Story to your list of ways to start and end fairy tales.

SOME THINGS TO DO

- Compare the various versions.
- Try to find other versions of the "Tar Baby" theme.
- Older children could write their own trickster tale using different animals and settings.
- Older children might enjoy hearing one of the stories in the original dialect. You can find the original versions in Time for Fairy Tales Old and New by May Hill Arbuthnot.
- Compare the art work in the different books.
- If you should be lucky enough to be in the neighborhood of someone tarring a roof, take your children to see how the tar is very black and sticky.

An Art Idea to try . . .

In A Story A Story Gail Haley uses woodcuts to illustrate the story. You and your students can do a simplified form of this technique. It's great for printing backgrounds or a repeated motif in a book. Point out the woodcuts in Gail Haley's book and then do this project with your students.

1. Draw a design or shape on a piece of styrofoam, pressing down to form indentations. Use a blunt pencil or old ballpoint pen.
2. Cut out the shape.
3. Make a pad of newspapers. This will help your design to print well.
4. Place tempera paint on the glass and spread it with a brayer, being sure to cover the brayer with paint.
5. Roll the brayer over your design, being careful not to fill in the indentations. If you don't have a brayer, use a brush to cover the styrofoam with paint.
6. Press the painted design down on your paper. Make as many prints as you wish.

You need:
- *a brayer or paint brush*
- *a piece of glass or cardboard with smooth foil*
- *liquid tempera*
- *styrofoam tray*
- *dull pencil or old pen*

TWO MODERN TALES . . .

THE TALE OF PETER RABBIT BY BEATRIX POTTER

AND

RABBIT HILL BY ROBERT LAWSON

Help children to make maps to go along with the stories. This will help them visualize the movement from place to place in the story. At the same time your students will be learning about mapping skills in a meaningful way. For Rabbit Hill I have provided the beginnings of a map for you to use (see next page). Have your students use it as you read the story. They can draw in the woods, fields and other places which are mentioned in the story. The book I have has a wonderful map on the end papers. Check your copy to see if it has one. You may also want to make a large map for your bulletin board or library corner.

Make a salt and flour three dimensional map of the stories. Children could also make clay figures of the animals found in the story to go with the map. Be sure to provide them with pictures and facts about the animals, so that the children can mold the animals with some accuracy. This would be a good time to introduce the library, books and encyclopedias as research tools. Your sand table also provides children with another way to show a setting three dimensionally. Challenge children to find ways to show the garden, the fence, etc. in their three dimensional maps.

Display pictures of the animals that are talked about in the stories. Some children probably cannot visualize what some of the animals look like and the pictures will help them have a better understanding of the story.

Second and third graders love to hear the story of Rabbit Hill read aloud to them. Read it by chapters during your oral language time.

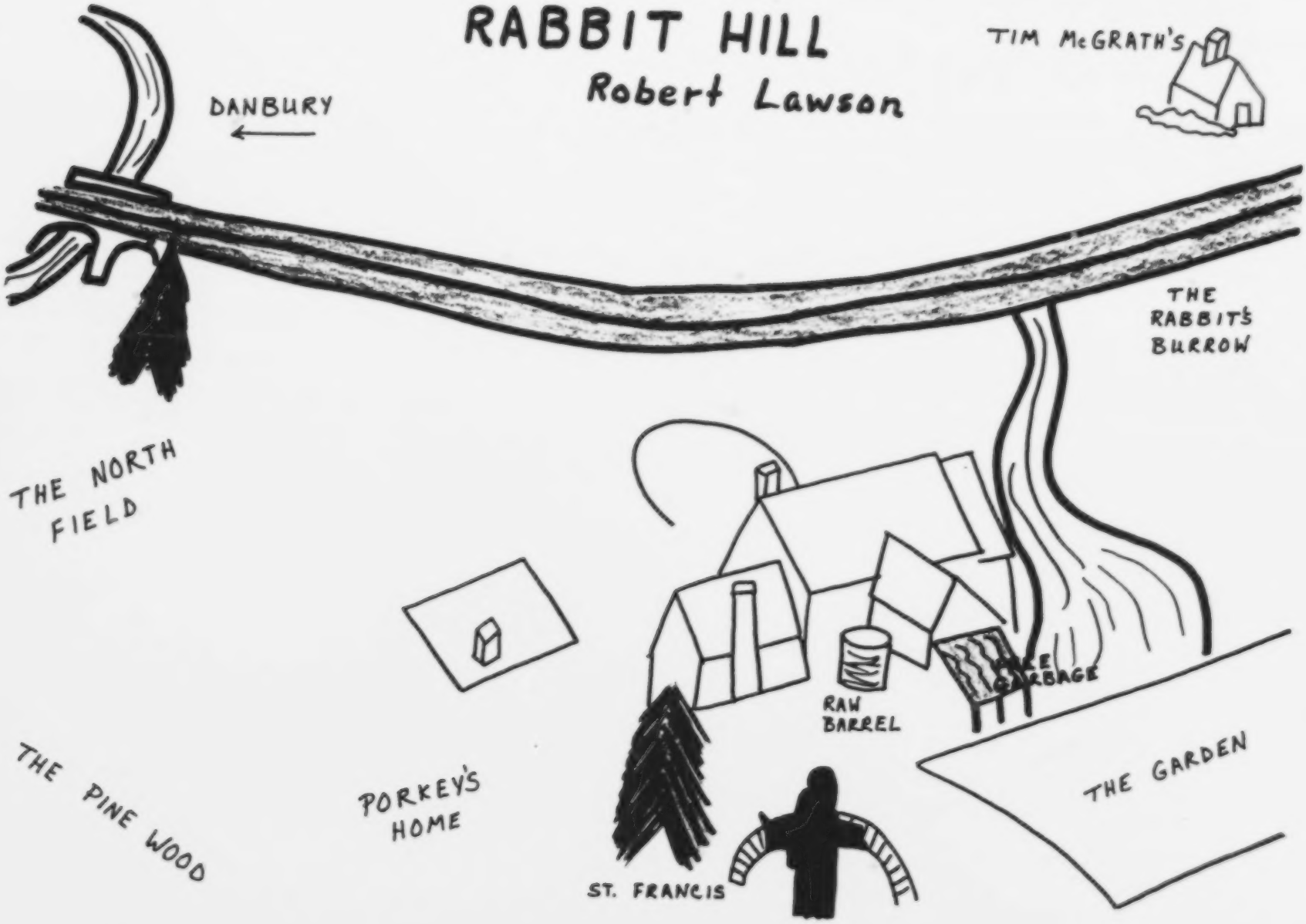
Learn to draw some of the animals found in the stories.

Record the story of Peter Rabbit on a cassette tape. Place the cassette and book in your listening center. Along with it place a laminated map (which you have previously done with your children) and cardboard figures they can move as they listen to the story.

Try to give children an opportunity to see a live rabbit. Even if they have seen one previously, the stories will help them to see rabbits with "new eyes." Through questioning, you can help them to extend their knowledge about the animal.

RABBIT HILL

Robert Lawson



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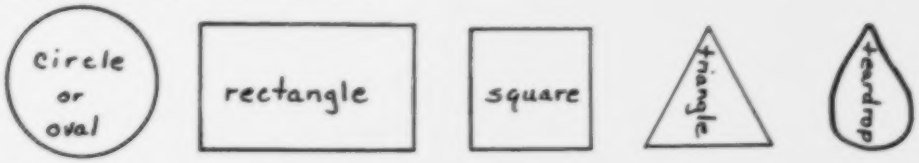
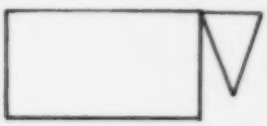
DRAWING ANIMALS

BEGIN WITH A BASIC SHAPE . . .

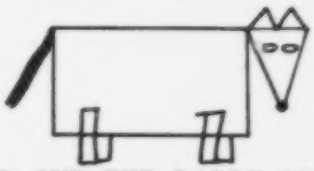


DECIDE ON THE BASIC SHAPE OF THE ANIMAL.
DRAW THE LARGEST PART FIRST.

ADD THE NEXT LARGEST BODY PART.



ADD THE REST OF THE BODY PARTS.



ROUND OUT THE BASIC SHAPES AND ADD DETAILS.

Provide your children with some techniques which will give them confidence in drawing!

Not too bad for my first attempt at drawing a fox. If I can do it, so can you!

MORE TO COLLECT AND PAINT FROM NATURE by John Hawkinson

This very excellent book shows how to paint various animals, including rabbits, raccoons, mice and birds. A copy of this book should be in your reference library. Use it to teach your children how to use basic shapes to draw animals.

THE I CAN'T DRAW BOOK by Jerry Warshaw

This book should also be in your reference library.

ED EMBERLEY'S DRAWING BOOK OF ANIMALS by Ed Emberley

Another excellent book showing children how to draw animals using basic shapes. Check your school or public library for this book. You may also want to see if they have any of the other drawing books by Ed Emberley.

Pourquoi Stories

A type of folk tale that tells why animals or people have certain traits, characteristics, or customs. Many American Indian stories are "why" stories which explain some animal feature.

As you read these stories make a list of beginning phrases--

In the beginning. . .

In the days of the grandfathers. . .

Once when. . .

When the earth was new. . .

Many moons ago. . .

Post your list where your students will have access to it. Watch for the phrases in your students' writing.

KINDS OF "WHY" STORIES

1) *serious or mythical*

2) *amusing or anecdotal*

3) *legendary--explains some phenomena or geographic feature*

HOW THE PEOPLE SANG THE MOUNTAINS UP

How and Why Stories

by Maria Leach

This excellent book contains Pourquoi stories from all over the world. It has stories about the earth, man, animals, birds, insects, fish and plants.

The Long-tailed Bear and Other Indian Legends by Natalia Belling is another good source book.

"Why the Bear is Stumpy-tailed," found in Favorite Tales Told in Norway by Virginia Haviland, is a favorite with children. How many other versions of this story can your students find?

MOST POURQUOI STORIES ARE SHORT AND GENERALLY INVOLVE A TRICKSTER.

From April/May 1981 Notes to Fort Yates Follow Through Staff.

More books you might want to use . . .

WHY THE NORTH STAR STANDS STILL AND OTHER INDIAN LEGENDS
William R. Palmer

WHY THE SUN AND THE MOON LIVE IN THE SKY
Elphinstone Dayrell

INDIAN TALES
retold by Joseph and Edith Raskin

THE DANCING STARS AN IROQUOIS LEGEND
retold by Anne Rockwell

HOW THE MOON BEGAN A TALE FROM GRIMM
James Reeves and Edward Ardiyzone

ANIMAL LEGENDS
K. Nixon

Turn your students loose in the library. How many other books can they find that will be in the category of pourquoi tales? Are they all found in the same area of the library?

Encourage your students to write their own how and why tales. You might have some brainstorming sessions to determine some animals and their characteristics.

If you think the writing may be too difficult, have the children tape their stories. Put the tapes in the listening center. Do this only after children have heard you read lots of pourquoi stories.

READ TALES FROM INDIANS WHO LIVE OR HAVE LIVED IN YOUR AREA. INVITE SOME OF THE ELDERS IN TO TELL THE STORIES. CHECK FIRST TO SEE THAT IT WOULD BE PERMISSABLE TO RECOUNT THE STORIES IN THE CLASSROOM.

Just So Stories

BY Rudyard Kipling

Perhaps the most famous pourquoi stories of all are found in this book by Rudyard Kipling. If your children have not yet heard these stories, now is the time to introduce them. Don't put it off any longer.

"In the sea, once upon a time, O my Best Beloved, there was a. . . ." *Thus begins this book of marvelous language and rhythms. Your children will enjoy rolling many of the phrases and words off their tongues. Try some yourself.*

a great big lolloping humph

stickly prickly hedgehog

with their scales lying lippety-lappety

These are perfect stories to illustrate. Get out the paints, crayons and chalk and have your children pick their favorite to illustrate.

THESE STORIES ARE MEANT TO BE READ ALOUD. THEN LEAVE THE BOOK OUT WHERE CHILDREN CAN REREAD THEM AGAIN AND AGAIN.

HOW THE LEOPARD GOT HIS SPOTS

by Rudyard Kipling

This beautifully illustrated story will introduce your students to animal camouflage as a means of protection.

Use some of the vocabulary as a model for children making up their own. Here's some from the story to get you started.

slippery - slidy
speckly - spickly
sprottled - spottled

Carefully examine the spots on a picture of a leopard. Can your students distinguish the five black fingertips?

READ ABOUT RABBITS . . .

Ask a farmer, friend, parent, pet store owner or child to bring their live rabbit to school for a day or two. This will provide children with the opportunity to closely observe the animal over a period of time.

QUESTIONS TO EXPLORE AND THINK ABOUT

Does a rabbit have fur or hair?

Why do rabbits have whiskers?

When does a rabbit usually feed?

Is a rabbit a rodent?

How do rabbits signal each other?

Do rabbits make sounds?

Can a rabbit run?

How fast can a rabbit move?

What color eyes do rabbits have?

What do baby rabbits eat?

Are a rabbit's feet the same size?

Why do rabbits wiggle their noses?

What do rabbits eat?

Where do rabbits live?

Can rabbits change color with the seasons?

Are hares or rabbits found in your area of the country? Where?

When can you see rabbits in the wild?

Why do people not like rabbits on their property?

Are domestic (tame) rabbits the same as wild ones?

Does a rabbit have fur on the bottom of its feet?

How many toes does a rabbit have?

Set up an easel or painting area near the rabbit. Encourage the children to paint and write about the rabbit.

Measure the body parts. Are the front and back legs and feet the same size? How long are the ears? Is the tail really round? How long is the rabbit from the tip of its nose to its tail?

Brainstorm for words to describe the rabbit and its movement. Try to go beyond the obvious. Place your word list near the rabbit. Encourage children to use the list frequently.

Place lots of filmstrips, records, books and pictures about rabbits throughout your classroom.

Compare paw prints of rabbits with other animals. If you live in an area where children are likely to see rabbit tracks, take them on a walking trip to look for them. It's always so much more meaningful to see them in actual settings rather than in a book.

Older children might like to make a chart showing the speeds at which various animals can move. They could then compare the rabbit's movement with that of other animals.

Try to find some of the various names for rabbits --

jackrabbits
cottontail
snowshoe rabbit

Rabbits hop. Have your students find other animals that move by hopping. Here are some to get you started. . .

frogs
kangaroos
children
toads

Some books you may want to use to find out more about rabbits:

Cottontail Rabbit
by Elizabeth Schwartz

The Jack Rabbit
by M. Vere DeVault

Rabbits in the Meadow
by Lilo Hess

Small One
by Zhenya Gay

The Rabbit Story
by Alvin Tresselt

THE EASTER EGG ARTISTS

Adrienne Adams

This is a perfect book to use at Easter. Try some of the designs in the book at your own class egg dyeing party. And of course, what better time to go on an egg-shaped hunt. How many things in and around your school are egg-shaped?

READ "THERE IT HOPS" BY AILEEN FISHER. IT'S A POEM YOUR STUDENTS WILL ENJOY.

MORE BOOKS ABOUT RABBITS

WHO'S IN RABBIT'S HOUSE?
Verna Aardema

I've recommended this book before. It's a marvelous book! Dramatize it, put it on tape, use it with puppets, or just plain enjoy it.

Don't forget one of the best loved stories -- THE TALE OF PETER RABBIT by Beatrix Potter

RABBIT HILL
Robert Lawson

If you've read Rabbit Hill already, your students may enjoy hearing the sequel, The Tough Winter.

Mr. Rabbit and the Lovely Present
Charlotte Zolotow

The Rabbit and the Turnip
Richard Sadler

Rabbit Garden
Miska Miles

The Little Rabbit Who Wanted Red Wings
Carolyn Sherwin Bailey

The Velveteen Rabbit
Margery Bianco

THE GOLDEN BUNNY
Margaret Wise Brown

A book filled with stories, poems and pictures about rabbits.

LISTEN RABBIT
Aileen Fisher

This book should be read aloud to gain the full appreciation and rhythm of the language. In the story we follow a small boy as he watches and patiently tries to make friends with a rabbit. You'll find this a sensitive, but good source book to find out about rabbits.

LITTLE RABBIT'S LOOSE TOOTH
LUCY BATE

SEVEN LITTLE RABBITS
JOHN BECKER

WHERE IS IT?
TANA HOBAN

RABBIT COUNTRY
DENISE & QUIN TREZ

THE RABBIT GARDEN
GEORGIA TUFTS

H O P S C O T C H

Introduce this game to your students. It will keep them very involved on the playground.

If your students are already playing a version of Hopscotch, teach them a new variation. Games of the World by Frederic V. Grunfeld gives directions for six different versions of Hopscotch.

Turn the old favorite, "Ten Little Indians," into an Easter song by changing it to "Ten Little Rabbits." Build your song with sentence strips and the pocket chart.

A perfect time to do the "Bunny Hop." Check your school record collections for music and directions.

B U N N Y P O E M S T O U S E

"There It Hops" by Aileen Fisher

"Mister Rabbit" Traditional

"Rabbits" by Dorothy Baruch

"The Pink Rabbit" by Rose Fyleman

"The Rabbit" by Georgia R. Durston

"Who Scans the Meadow" by Aileen Fisher

"The Rabbit" by Dixie Wilson

"The Rabbit" by E. M. Roberts

"A Dream" by Margaret W. Brown

"Song of the Bunnies" by Margaret W. Brown

"The Rabbit Skip" by Margaret W. Brown.

ALERT TEACHERS COLLECT OBJECTS, MODELS AND FIGURINES RELATED TO CHILDREN'S LITERATURE. INTRIGUED BY THESE OBJECTS, THE CHILD MAY BECOME INTERESTED IN READING THE ACCOMPANYING BOOKS.

THE SETTING OF A STORY MAY BE SUGGESTED BY ARRANGING OBJECTS IN A DISPLAY--ROCKS, SAND AND SEASHELLS FOR MC CLOSKEY'S TIME OF WONDER, FOR EXAMPLE.

TEACHER MAY MAKE DIORAMA OR SHADOW BOX.

DEVELOP FILE OF BIOGRAPHICAL INFORMATION, PICTURES AND ANECDOTES ABOUT AUTHORS AND ILLUSTRATORS.

Mother Rabbit's Son Tom

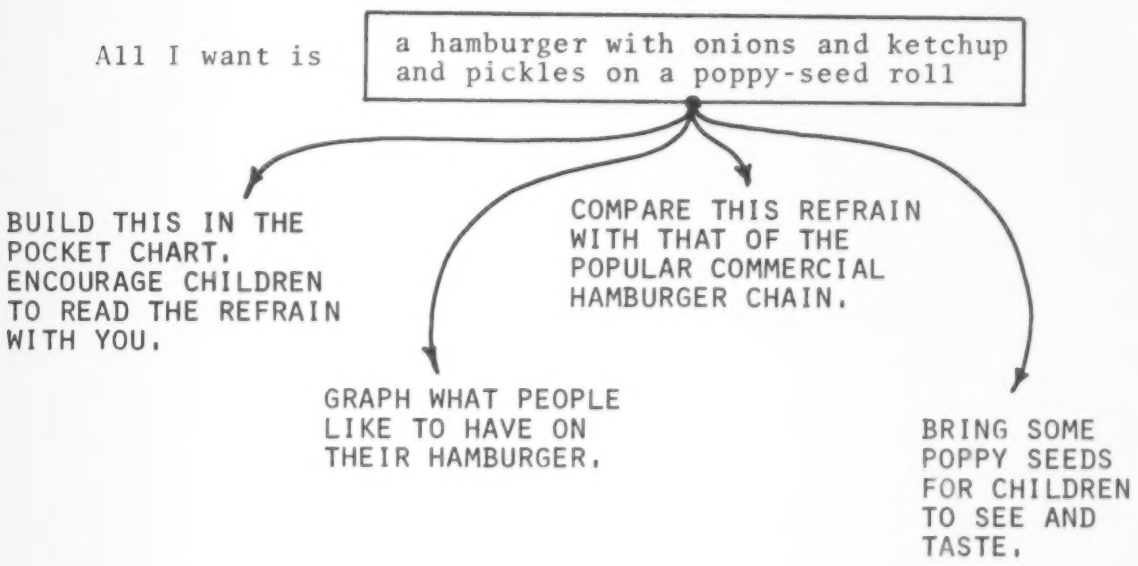
by

Dick Gackenbach

This is a good lap-reading book. Gather two or three children close about you and enjoy this delightful story with them. Even kindergarten children appreciate the humor of this book and beginning readers can read it on their own. However, don't try reading this story without showing the illustrations. They are half the story.

This is a cumulative story, which takes the readers through the seasons of the year, and also has a repeated refrain.

Tom's favorite response throughout the story is. . .


All I want is
a hamburger with onions and ketchup and pickles on a poppy-seed roll
BUILD THIS IN THE POCKET CHART. ENCOURAGE CHILDREN TO READ THE REFRAIN WITH YOU.
COMPARE THIS REFRAIN WITH THAT OF THE POPULAR COMMERCIAL HAMBURGER CHAIN.
GRAPH WHAT PEOPLE LIKE TO HAVE ON THEIR HAMBURGER.
BRING SOME POPPY SEEDS FOR CHILDREN TO SEE AND TASTE.

Build a chart such as the following, as you reread this story.

sweet	*Spring*	*tender dandelions*
bright	*Summer*	*clover*
	Autumn	*white corn*
icy	*Winter*	*nut & berry stew*

What other things might rabbits eat during the various seasons?

What other words can be used to describe the seasons?

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IF YOU'RE THINKING OF GETTING A RABBIT FOR YOUR CLASSROOM, CONSIDER....

A rabbit cannot be housebroken.

It will need a wire and wood cage with a wire netting floor and a hinged top.

The cage should be placed well above drafty floors.

Rabbits will need rabbit pellets from a pet store and fresh vegetables such as carrots, beet and turnip tops and cabbage.

Water should be changed daily.

All uneaten food should be removed each day.

FOR YOUR TALKING AND WRITING TIME. . .

TELL POURQUOI TALES:

Why the rabbit has long ears

Why the rabbit has a short fluffy tail

Why the rabbit's nose twitches

Why the rabbit can only hop

Why the rabbit can't talk

Use the structure of Rosie's Walk by Pat Hutchinson as a model for children to write about a rabbit's walk. What will he see, hear, smell and feel? What dangers or surprises will he encounter?

Do a countdown poem with your students.

1. fuzzy rabbit sitting in the sun.
2. brown rabbits stuck in some goo.

Build your poem in the pocket chart. Use pictures for the little ones.

Can't bring a live rabbit into your classroom??? Albrecht Durer painted a wonderful picture called "Young Hare." Try to get a print of this painting from your public library to hang in your room. Compare the hare in Durer's painting with a live animal or other pictures of rabbits and hares.

FABLES

MOST FABLES ARE ATTRIBUTED TO A GREEK SLAVE, AESOP, WHO LIVED ABOUT 600 B.C. IT IS BELIEVED HE COMPOSED SOME OF THE STORIES AND ALSO RETOLD ONES HE HAD HEARD. ABOUT 230 A.D., A GREEK WRITER, VALERIUS BABRIUS, COMBINED AESOP'S FABLES WITH SOME FROM INDIA AND TRANSLATED ALL OF THEM INTO GREEK. SINCE THEN OTHER WRITERS HAVE RETOLD AND EXPANDED THE FABLES INTO LONGER STORIES.

Locate Greece on a world map.

Make a list of proverbs from Aesop. Have children choose one to illustrate.

PROVERBS...

It is difficult to see beyond one's nose.
Pride goeth before a fall.
You can't please everybody.
Don't believe all you hear.
In union there is strength.
A bird in the cage is worth two on the branch.

Make a selection of fables available to students for their independent reading.

FAVORITES ENJOYED BY EVERYONE

The North Wind and the Sun
The Hare and the Tortoise
The Country Mouse and the Town Mouse
The Fox and the Crow
Androcles and the Lion
The Lion and the Mouse
The Shepherd Boy and the Wolf

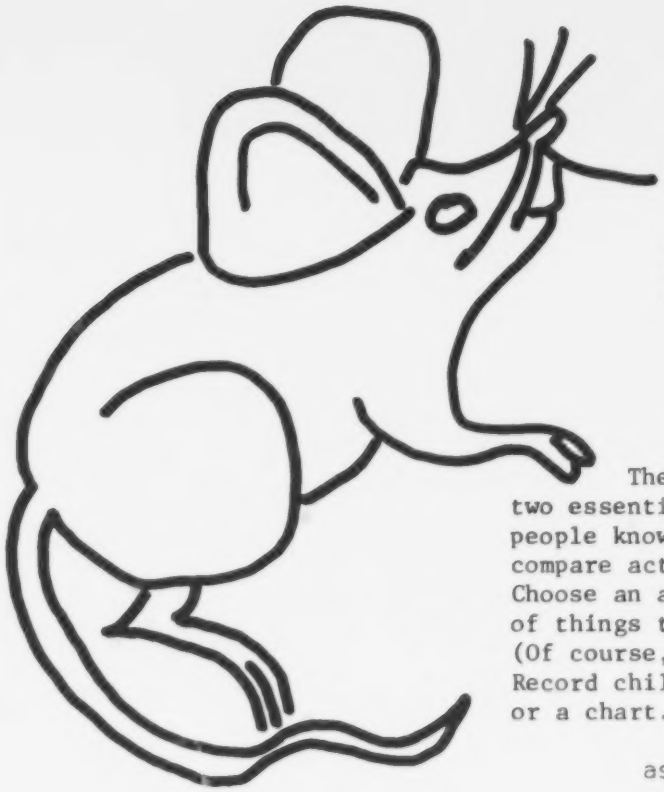
Have children work in small groups or pairs. Give each group time to choose a fable and prepare a pantomime presentation to be performed for the rest of the class. This would be a good activity for reading groups to do independently while you are working with another group. As they dramatize the fable, the class tries to guess which one it is. Try this only after children are very familiar with the fables.

Although discussion and understanding of the proverbs is suited more to older children, all children enjoy the telling of and dramatization of many of the fables.

FABLES...

- GENERALLY HAVE CHARACTERS WHICH ARE ANIMALS THAT TALK AND ACT LIKE HUMAN BEINGS.
- USUALLY NO MORE THAN THREE CHARACTERS.
- USUALLY ENCOMPASS ONE INCIDENT.
- TEACH A MORAL AND OFFER USEFUL ADVICE.
- USUALLY END WITH A PROVERB WHICH SUMS UP ITS MORAL AND ADVICE.

From February 1981 Notes to Fort Yates Follow Through Staff.



THE COUNTRY MOUSE AND THE TOWN MOUSE

a fable by Aesop

A reading or retelling of this favorite fable can be an exciting jumping-off place for many productive, hands-on learning experiences for your children.

The use of similes (comparison of two essentially unlike things) helps other people know what we mean. Have children compare actions with those of animals. Choose an animal and ask children to think of things they can do like the animal. (Of course, all this is done orally!) Record children's answers on the board or a chart.

as quiet as a mouse

as big as an elephant

as _____ as a _____

Encourage children to use these forms of comparison in their writing.

A WORD OF WARNING ABOUT FABLES!

Continued moralizing can become dull. Enjoy these stories as stories.

Is there anyone in your community who has a pet mouse? Perhaps they will be willing to bring the mouse for the children to see and touch. Encourage children to be very observant about how the mouse looks and feels, how it moves, and how it reacts to noise and people.

SOME POEMS YOU'LL WANT TO USE . . .

Mouse House by Aileen Fisher

Mouse Dinner by Aileen Fisher

The City Mouse and the Garden Mouse by Christina Rossetti

I Wouldn't by John Ciardi

Wanted by Rose Fyleman

The House of the Mouse by Lucy Sprague Mitchell

Town Mouse Country Mouse by Aldren A. Watson (A Young Owl Book, Holt, Rinehart and Winston, 1966) is a book you will certainly want to use at this time. It pictures mice families from town and country working, playing and celebrating holidays. The pictures are wonderful and may give you some ideas for doing your own murals or pictures.

In the city I can _____, but in the country I can _____.
I can _____ in the country, but I can't _____.

Use these frames only after lots of brainstorming and talking. Some of children's best writing is about personal experiences and done after talking or drawing about the experience. Give children time to tell each other about experiences they have had in the country or in town. Then have them write their experiences. Display the writings with murals or on a bulletin board for all to read.

Lots to think about and discuss

- Things people do
- Foods available for animals
- Numbers of people
- Buildings
- Open spaces
- Machines
- Animals

TOWN and COUNTRY

CONTRAST

COMPARE

Field trips and walks always help to make information and concepts more meaningful for children. If possible, try to take a trip to either a town or out in the country. Even though children may have been there many times before, they will be seeing it with new eyes as you structure it for maximum learning.

Use blocks, tinker toys, Legos and other building materials in your classroom to build town and country three-dimensional scenes.

ALL CHILDREN CAN MAKE . . .

BUILDINGS	
Town	Country
Use pictures from magazines or word lists from brainstorming sessions.	

CHARTS

TOWN	COUNTRY
Use magazines, paint, crayon, chalk or collage materials to make scenes contrasting town and country.	

MURALS

Have your best handwriters do the printing for you.

Brian Wildsmith has illustrated several of Aesop's fables. Bring these beautiful books into your classroom to share with your students. Compare his versions with those of Aesop's.

The Miller, the Boy and the Donkey

The North Wind and the Sun

The Lion and the Rat

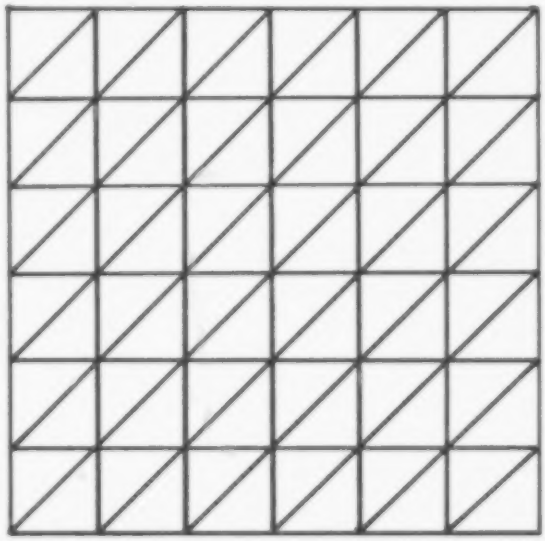
The Hare and the Tortoise

Make a picture using only circles, triangles and squares. Give your students gummed paper or construction paper shapes, or provide them with templates to trace. Encourage them to write about their picture.

LEARNING ABOUT SHAPES...

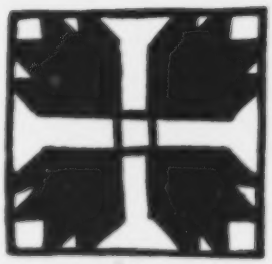
As you and your children share the book, The Miller, the Boy and the Donkey by Brian Wildsmith, be sure to point out to children the varied ways Brian Wildsmith has made use of geometric shapes to illustrate the story. Designs are formed by squares, triangles, circles and trapezoids. Look for repeated designs in clothing, buildings, animals and people.

Once you have shared the story, place it, along with your pattern or parquetry blocks, on a table. Encourage children to make some designs and patterns that are found in the illustrations. Provide them with paper, pencils, crayons or pattern block stickers. Have children make designs with the blocks and then copy them to make a permanent record of their designs. You now have the start of a hands-on activity center about geometry.

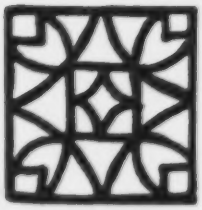


How many different designs can your students make by coloring this grid?

Many of the designs and patterns in The Miller, the Boy and the Donkey by Brian Wildsmith remind me of traditional quilt designs. Show children how geometric shaped pieces of cloth are stitched together to make a quilt. Perhaps a parent or member of the community would be willing to share their expertise in quilt-making with your class.

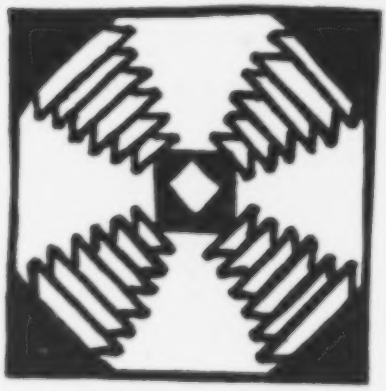


BEAR'S PAW

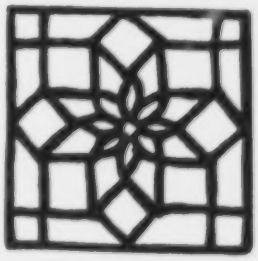


BLEEDING HEART

A quilt book showing quilt designs would be a good addition to your Geometry Center at this time. Encourage children to try to make some of the quilt patterns with their pattern blocks or with pattern block stickers.

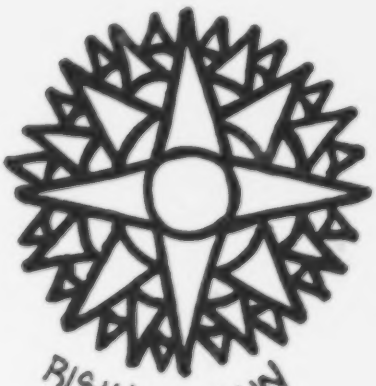


PINEAPPLE



STARLIGHT

Traditional quilt designs have interesting names. Children might like to give their designs names, also.



RISING SUN

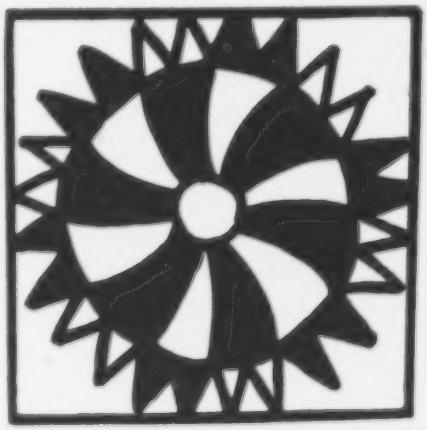
ANOTHER ADDITION TO YOUR CENTER

Place shapes (triangles, circles, squares) cut from sandpaper (the sandpaper holds the shape firmly on the cloth and makes it easier to trace), squares of cardboard, scraps of cotton cloth and number 2 pencils in the center. Children trace shapes on pieces of cloth, cut them out and glue them onto the cardboard to make a design. Colored construction paper could be used in place of cloth. This is detailed work and children will need plenty of time to make a design they like.

Hint: Use lots of different bright colors of cloth! Get your parents involved by asking them to send unneeded scraps of cotton cloth to school. Also, provide children with decent scissors which will easily cut cloth.

Have children compare the designs found in Wildsmith's book with the designs found in a quilting book. Can they find any that are similar?

TREE OF PARADISE



SUNBURST

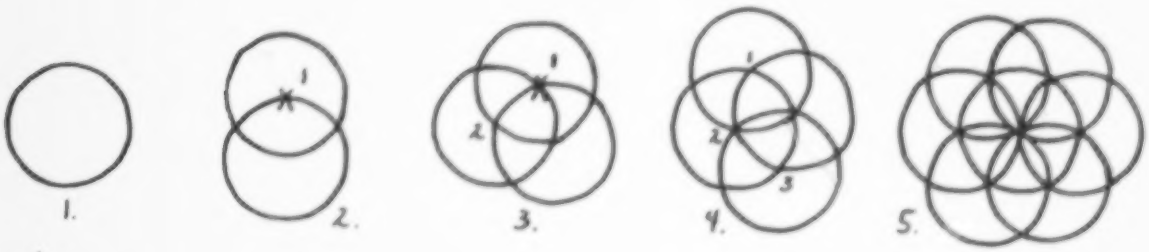
Using compasses, markers and crayons have children make up their own designs.

SOMETHING FOR THE OLDER ONES...
LEARNING TO USE THE COMPASS.

YOU WILL NEED

several compasses
pencils
heavy cardboard,
board, or thick
magazine
paper

As you show children how to work with this tool, be sure you give them definite guidelines for its use. If the guidelines are abused, remove it immediately and return it when you feel it will be used properly. You should have little trouble, as children will be eager to experiment and use it, once they see the possibilities for enlarging their pattern making skills.



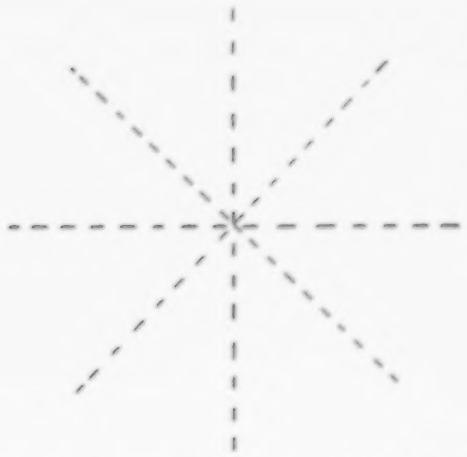
1) *Place a paper on top of a piece of cardboard or old magazine (you don't want the point damaging tables or desks).*
2) *Draw a circle with the compass. (#1)*
3) *Place the point of the compass at any point on the circle. Draw another circle. (#2) The new circle will go through the exact center of the first circle.*
4) *Place the point of the compass on the point where the first and second circles intersect. Draw a new circle. (#3)*
5) *Place the point of the compass at the place where the second and third circles intersect. Draw a new circle. (#4)*
6) *Continue in this manner until the design is complete.*
7) *Use markers or crayons to color the design.*
8) *Now encourage your students to experiment making their own designs.*

To make triangles within your circle, mark points where circles intersect (large dots in illustration). Connect adjacent ones with lines to form triangles (A and B in illustration).

As you demonstrate and work with your students, MODEL this vocabulary for them.

square	intersect
triangle	adjacent
circle	compass
point	line
angle	

SOMETHING FOR EVERYONE...



Even very young children can make their own designs using triangles and circles. Provide children with patterns of circles. Trace the circle on a paper, cut it out and then fold it in half. Continue carefully folding the paper in half to form triangles. When the paper is opened, trace along the creases to form triangles. Use crayons or markers to color in your design.

Use pattern blocks or paper shapes for this activity. First use all triangles to cover a surface of a paper without leaving a gap anywhere. Will the triangles fit together? Now take a collection of other shapes and find out which ones fit together and which ones leave a gap or space.

Look around the school for patterns of bricks, tiles and floors. Make sketches of some of these. Which shapes were used the most frequently? Look for shapes in objects and clothing. Help children to see the relationship of shapes to their everyday lives.

Now is the time for all good teachers to dig in those cupboards and dust off the tangrams and geoboards that have been sitting there all year. Have children use them to make their own designs. The tangrams can be used as templates for tracing and, of course, marvelous patterns can be made on the geoboards. No colored rubberbands?!? Use extra fine yarn instead. I know in some of the schools, off hiding on a shelf someplace, are plastic templates for pattern blocks and tangrams. Those lucky teachers have a wonderful tool for children to use in a shape center.

While your students are having fun making all these designs they will be <u>learning</u>:

terminology
properties of shapes
how shapes fit together

All of the above things cannot be learned in the one or two lessons given in the math book. Children need <u>lots of practice</u>. The activities in your center <u>will give children that practice</u>.

THE BLIND MEN AND THE ELEPHANT
(A FABLE FROM INDIA)

This fable about six blind men who go to "see" an elephant and their arguments as to what an elephant is has enchanted children for generations. Perhaps you remember it from your own school days. I found three versions of it which you might like to use with your class.

1. *THE BLIND MEN AND THE ELEPHANT retold by Lillian Quigley*
This paperback from Charles Scribner's Sons can be read and enjoyed, not only by good first grade readers, but older children as well.

Do this as a play for another class or invite parents, principal, janitors, cooks and other school personnel to see the performance. Those not involved in the play directly could be greeters, stage hands or ushers.

This is a perfect story to have children dramatize. Clear a space in the room. Have all children pantomime the actions and say the dialogue for each of the characters in the story. Then let children take various parts while the rest watch. This technique will help to involve all children at all times -- no waiting for your turn, thus no time to get into mischief. More importantly, as children mime the actions of words and story and use the senses of speech, hearing, touch and sight, they will be gaining greater insight and meaning of concepts and words. Remember the ancient Chinese proverb. . .

I hear. . .and I forget
I see. . .and I remember
I do. . .and I understand

Your responsibility, as children participate in this activity, is to help them see relationships by providing commentary, questions and vocabulary.

2. *"The Blind Men and the Elephant," a poem by John Godfrey Saxe, follows the same basic story line as Quigley's book, but changes somewhat the wording of the dialogue.*

Use the repeated pattern in Quigley's book to describe other objects or animals.

How *soft* !
A baby's cheek is like a velvet cushion.

Children will need to hear lots of examples before they are expected to write their own.

3. *Perhaps my favorite version of this fable (I like to use it after they have heard the other versions) is a paperback entitled THE MYSTERY BEAST OF OSTERGEEST by Steven Kellogg (Dial Press, Pied Piper Book). The story line is basically the same, but it is the illustrations which make this book SPECIAL and which make it a favorite with children and adults alike. The detailed color illustrations and dialogue (separate from the story text) in cartoon-style balloons are extremely humorous. Both you and your students will spend many hours enjoying this book. Be sure to observe that the wise man in this version turns out to be a small boy.*

After reading and using the book, The Blind Men and the Elephant, take time to do some activities with your class that may help them become aware of what it means to be blind and how blind people cope with this handicap. At the same time children can learn something about how they can be a friend with a blind person and how to live and work with a blind person. Try some of these activities which teach without being preachy.

TRUSTING ONE ANOTHER
(learning through role play)

Have each child choose a partner. Blindfold one child from each group to be the blind person. Encourage them to use their other senses (hearing, touch) to do things and to find out what is going on about them. The partner will be responsible for being sure that the blindfolded child does not injure him/herself and to help them in any way they can. Once children have had an opportunity to do some things in the classroom and get used to the blindfold, have the seeing child take them on a short walk. Later have the children switch roles, giving everyone an opportunity to be the "blind person." After everyone has had an opportunity to role play, sit down with your students to talk about how they felt, how they had to trust each other and the difficulties encountered in guiding and giving directions. At the same time, be sure to talk about how the other senses were used and how they could still do many things, even though they could not see.

Scholastic has published a book titled Louis Braille: The Boy Who Invented Books for the Blind by Davidson. Try to get this book to read to your class. Also, bring in a braille book for children to see and feel. Your public library might be able to give you some help with this project.

Show children how to offer their arm to a blind person, so that the person can be guided.

Invite a blind person to speak to the class. Children might be surprised to find out that blind people can do almost everything other people do. I know a blind woman who knits and crochets beautiful baby clothes and who can tell you what kind of yarn you have and where it can be purchased.

If there are blind children in your school, have children work on ways they can adapt the environment, games and activities so that the blind child can participate.

"A FEELY BOX"

Use this box to heighten children's awareness of their sense of touch and to help them become aware of the many objects they can identify and know about, even though they cannot see the object.

Cut a round hole in a cardboard box large enough for a child's arm to go through. Attach an old sock to the inside of the box. Cut off the toe part of the sock. You now have a tube attached to the box through which children can put their arm to feel what is inside the box. Place an object inside the box for children to feel. Close the lid of the box with a piece of tape or pieces of velcro.

This could become a daily guessing game for children to do as they come in the morning. Show the object during your group meeting to find out who guessed correctly.

MORE FABLES
(TRADITIONAL AND MODERN)

TICO AND THE GOLDEN WINGS by Leo Lionni is based on a Hindu fable.

JATAKA TALES
Edited by Nancy DeRoin
(Houghton Mifflin, '975)

The Jataka Tales are to Buddhist culture and the East what Aesop's Fables are to the West. However, the Buddhist tales point to the importance of the individual and the solving of life's problems based on cooperation, understanding, creativity and wisdom. These tales have been enjoyed for more than two thousand years and are still fun to read. Nancy DeRoin has selected 30 tales, out of 500, for this book. Each tale ends with a verse, which sums up the moral of the story. Here's an example from "Using Your Head."

"In times of danger
Use your head
Or, chances are, you'll
Lose your head."

15 FABLES OF DRYLOV
Guy Daniels

These fables by Ivan Andreevich Drylov and translated by Daniels will be sure to delight your second and third grade students. Written in verse, they are amusing, while showing the absurdities of man and society.

FABLES
Arnold Lobel

FABLES (Harper & Row) by Arnold Lobel is a recently published book, which is sure to be a favorite with older children. Each fable has been created by Lobel especially for this book. If your school library doesn't have a copy, talk to the librarian about getting one.

THE GREENTAIL MOUSE
Leo Lionni

A group of country mice meet a city mouse who tells them about the Mardi Gras celebration. They decide to have their own Fat Tuesday celebration, but find that their peaceful life is replaced by hate and suspicion. The collage illustrations will give your students good ideas about how they can also use this technique to illustrate stories and poems.

ONCE A MOUSE . . .
Marcia Brown

In this tale from India, Marcia Brown uses shadows in the woodcut illustrations to help tell the story. Even the kindergarten and first grade children will enjoy this story, as they hunt for the various animals in the illustrations.

THE ELEPHANT AND HIS SECRET
Doris Dana

This fable by the Chilean poet and Nobel Prize winner, Gabriela Mistral, begins, "Before the elephant was really an elephant, before he had a shape, or a size, or any weight at all, he longed to be on earth. He wanted to be big and heavy." Follow the elephant as he begins his life on earth and eventually becomes a friend to many animals. You might want to work this story up for use on a flannel board.

DID YOU KNOW . . .

THE SHAPE OF THE INDIAN ELEPHANT IS DIFFERENT FROM THAT OF THE AFRICAN ELEPHANT?
THAT THE INDIAN ELEPHANT HAS FOUR TOENAILS AND THE AFRICAN ELEPHANT HAS ONLY THREE?

THIS INFORMATION AND MUCH MORE CAN BE FOUND IN AN EXCELLENT BOOK TITLED, ELEPHANTS THE LAST OF THE LAND GIANTS BY ANTHONY RAVIELLI. USE A CHART TO HELP CHILDREN ORGANIZE THEIR INFORMATION ABOUT THESE TWO ANIMALS.

	AFRICAN	INDIAN
HEIGHT		
WEIGHT		
SHAPE		
ETC.		

Bring out the clay and have children sculpt elephants and mice. Lots of thinking skills are involved here as children decide on proportion, placement of body parts and how they can show the animal in movement.

Be sure to use the poem "Eletelephony" by Laura E. Richards. It's a favorite!

Have you checked on films and filmstrips available from the school or public library about elephants?

Hannibal led 37 elephants over the Alps to attack Rome. In HANNIBAL AND HIS 37 ELEPHANTS by Marilyn Hirsch, Hannibal's journey is recreated with a great deal of humor. It is easy reading and second and third grade children would greatly enjoy it. It has a good map showing his journey. Compare it with a present-day map. Have there been any changes made since Hannibal lived?

KINDERGARTEN/FIRST GRADE TEACHERS --

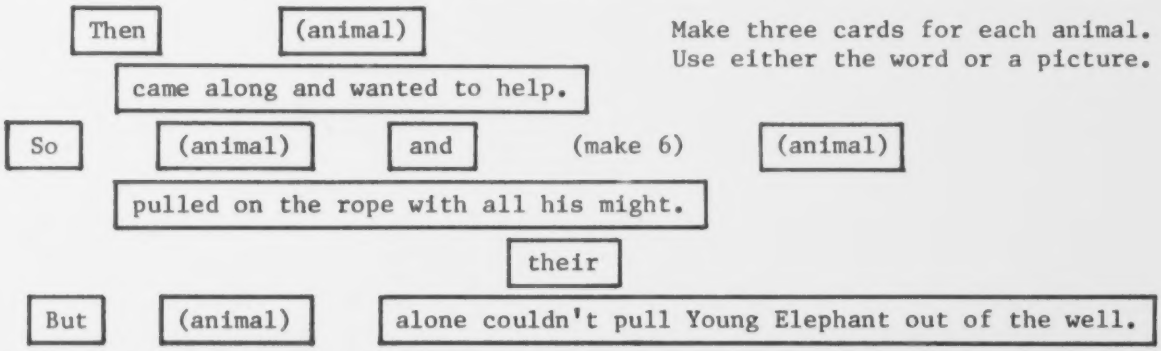
Have you used Elephant in a Well by Marie Hall Ets? It is a cumulative book which can easily be adapted for use on the flannel board or pocket chart.

Make pictures of the following animals to be used on the flannel board:

elephant	pig	mouse
horse	lamb	goat
cow	dog	

A good quality pellon (can be bought at any fabric store) works extremely well on the flannelboard. Pictures can easily be traced onto it and color can be applied with crayons or permanent markers (watercolor markers tend to rub off).

If you want to involve children in the reading of the story, write the following words and phrases on sentence strips.



Make three cards for each animal. Use either the word or a picture.

Build the story in a pocket chart (or tape them to the chalkboard) using the word and phrase cards. As you build the story, be sure to have children read with you. Later, put out all of the materials for children to use independently.

This is also a fun story to dramatize. At the same time, children will be learning a lot about sequencing and cumulative structure.

Once you've enjoyed this story, introduce your children to the old folktale, "The Turnip," which can be found in Sounds In the Wind by Bill Martin, Jr. It follows the same story line and structure as Elephant In A Well and children can do some comparing and contrasting of the two stories. Once they have had some experiences with the two stories, they might like to try writing their own cumulative stories.

COMPARE AND CONTRAST...

THE ELEPHANT AND THE MOUSE

SOMETHING TO THINK ABOUT

What do they eat?
Where do they live?
How do they move?
How many young do they have?
Do mice like to go in the water?
Can they both be pets?
Why are these animals beneficial/harmful?
How are they the same/different?
How do they defend themselves?

When comparing the physical features of these two animals, consider:

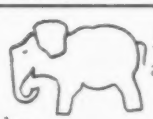
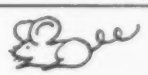
noses
tails
feet
skin
eyes
ears
legs
heads
position of ears and noses
use of body parts
necks
teeth

Rather than have children just read and record facts about these animals, do some hands-on kinds of activities which will help them understand the dimensions and relationships about which they read.

tape measure
masking tape
yard stick

Use these tools to measure and mark off the length and height of the animals and record the results using pictorial representations such as the following:

Lots of math and thinking skills involved in these activities.

	ELEPHANT	MOUSE
Length	An  is as long as 8 desks John, Sue & Paul together 30 reading books 50 new pencils	A  is as long as 1 pencil 4 colored blocks
Height	An _____ is as tall as	A _____ is . . .
Weight		

A _____ is bigger than an elephant,
(a mouse),

but a _____ is smaller than an elephant.
(a mouse).

An elephant can _____, but it can't _____.
(mouse)

A mouse lives in a _____, but an elephant lives in a _____.

USE THESE FRAMES ONLY AFTER YOU HAVE DONE LOTS OF MEASURING AND BRAINSTORMING ACTIVITIES.

WHAT IS BIG? WHAT IS LITTLE? *by Henry Ritchet Wing is an excellent book to use at this time. The frame of the book can easily be used by children to make their own books about big and little. It can also be found in Sounds of Numbers by Bill Martin, Jr.*

EASEL PAINTING

As teachers of young children, we often talk about large and small muscle development. Painting is one of the best ways for children to use these muscles--the small, grasping muscles of the hands and fingers and the larger muscles of the arm and shoulder.

Give children large pieces of paper and large brushes. If you don't have an easel, let children work on the floor or on a table. Incidentally, hallways often make excellent places for children to work on large pictures! If you've been using pictures in books and magazines to help children see basic shapes in the structure of an elephant, you might see some great elephant pictures as a result of your work.

> Have you ever provided the children in your class with various sizes of paint brushes? Using a broad brush such as might be used to paint a house requires different skills and muscles than using a brush found in a box of watercolors. Let children compare the amount of space covered by the brushes, the types of lines that are made, and the amount of paint one can have on a brush.

Why not go all the way and make a life-size elephant? Tape paper together to make a sheet large enough to draw an elephant. Research in some of the books will give you the dimensions.

Begin a list of words for. . .	
BIG	LITTLE
enormous	small
gigantic	tiny
large	petite
huge	wee

There are hundreds of wonderful sounding words in our language (nibble, scurry, wriggle). It isn't easy for children to use these words in brainstorming, writing or reading if they are not part of their mental word banks. As teachers, we need to be sure we read stories and poems in which children will see and hear language that is not part of their background and experience. Are you making a conscious effort to do this? How aware have you made yourself about words and how they fit together?

THE ELEPHANT WHO COULDN'T FORGET

by Faith McNulty is an "I Can Read Book" that would be a good starting point for a writing activity. If you can't find the book, do the activity anyhow--kids will enjoy it. The young elephant in this book never forgets any of the rules governing elephants. In a brainstorming session have children make up rules for elephants and mice. Put your list of rules where everyone can read them. Children could also choose a rule and illustrate the consequences of breaking it.

MOVEMENT TIME

Take your children to the gym to compare the movements of mice and elephants. Jot down beforehand some of the words, phrases and questions you will want to use with children.

scurry
fear
rage
contentment
leap

GRAPHS ARE ALWAYS FUN!

(Try these with your class)

Who likes mice?
Who has seen a live elephant?
Which would you rather have as a pet--an elephant or a mouse?
Does anyone have a mouse in their house?

ANIMAL CAMOUFLAGE

Animal camouflage is often an interesting topic for children. A comparison of how the mouse and elephant protect themselves is a topic that can generate a great deal of research by children. Does an elephant hide? If so, where? What are these animals' natural enemies? How do they protect themselves? Try getting ideas about these questions from the children before they begin their research. Some of their answers might be quite revealing.

PET OF THE MET

Lydia & Don Freeman

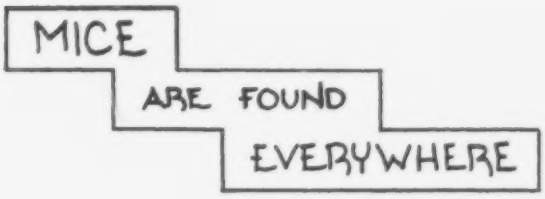
Maestro Petrini, a mouse, lived and worked in the Metropolitan Opera in New York. Of all the operas, his family loved "The Magic Flute" by Mozart the best. One day the entire mouse family goes to see a performance of the opera, but meet up with the opera house cat. After reading this book, play some of the music from "The Magic Flute" and tell them the story of the opera. A lovely book which tells the story is THE MAGIC FLUTE by Mozart and Emanuele Luzzati (Scroll Press, NY).

A lively class discussion might be generated by asking children to relate experiences they have had with mice. They could illustrate or write about these experiences later.

FACT OR FICTION???

Elephants are afraid of mice.

Try to find some pictures of these cities to display for a short time to help children put name and place together. Old National Geographic magazines are good sources.



TRUBLOFF

THE MOUSE WHO WANTED TO PLAY THE BALALAIKA

John Burningham

If you're not familiar with John Burningham's books, you might begin with this one. The art work is marvelous and the story well-written. Pay close attention to the language in this book--it's first-rate.

ANATOLE
ANATOLE AND THE PIANO
ANATOLE AND THE CAT
ANATOLE AND THE ROBOT

Eve Titus

All of these books by Eve Titus are about a very special French mouse who loves music. French words and places sprinkled throughout the text of these books.

A Venetian flavor is found in THE GONDOLIER OF VENICE by Robert Kraus. In this tale a mouse gondolier and his friends save Venice from sinking.

B O O K S

True Life Books

WHITEFOOT MOUSE
Barbara & Russell Peterson

A small forest mouse goes out to hunt food. Lots of facts and information in this book.

WILD MOUSE
Irene Brady

The author invites the reader to share in her day-to-day observations of the birth and rearing of three small babies.

THE MOUSE AND THE SONG
Marilynne K. Roach

This story is based on portions of Henry David Thoreau's journal entries. While living at Walden Pond, he wrote about a small mouse that lived in his cellar and shared his lunches. The text of this book will introduce Thoreau to children and, at the same time, give children lots of true fact information about mice. Compare the illustrations in this book with the illustrations in More to Collect and Paint From Nature by John Hawkinson.

MOUSEKIN FINDS A FRIEND
MOUSEKIN'S ABC
MOUSEKIN'S FAMILY
MOUSEKIN'S GOLDEN HOUSE
MOUSEKIN'S WOODLAND SLEEPERS
all above by Edna Miller

These are beautifully illustrated books which all children should be using sometime in their school life.

MOUSE AND COMPANY
Lilo Hess

Black and white photos detail the journey of a young female Deer Mouse. At the same time, the author gives lots of information about the Deer Mouse's relatives.

BEAR MOUSE
Bernice Freschet

This beautiful book tells of a mother mouse and her quest to provide nourishment for her young family.

JUMBO GIANT CIRCUS ELEPHANT
Justin Denzel

This book contains the true story of an African elephant who for many years lived in the London Zoo and eventually became a star performer with an American circus.

ELEPHANT BABY
Udiavar G. Rao

Colored photos show how a young Indian elephant is trained to be a worker and hunter.

Fiction Books

AN ELEPHANT IS NOT A CAT
Alvin Tresselt and Wilbur Wheaton

An amusing story about a man who tries to use an elephant to scare away the mice in his mill. The author leads one to believe that elephants are truly afraid of mice. Older children might research this to find out if it is a true fact. This would be a good time to discuss with them that not everything we read is true.

ELEPHANT
Byron Barton

and

THE ELEPHANT'S NEST
Marilee Robin Burton

Two wordless books which children can use to write their own stories.

THE MOUSE AND THE ELEPHANT
Barbara K. Walker and Naki Tezel

A very small, but very proud, mouse sets off to find the elephant who is master of the forest. The mouse meets different animals during his journey.

THE DREAM OF THE LITTLE ELEPHANT
Ruth Bornstein

A gentle book, both in story and pictures, about a small elephant who, with the help of a sea bird, the wind, a flower and a worm finds out where he really belongs.

MOUSE SOUP

and

MOUSE TALES
Arnold Lobel

Both of these "I Can Read Books" are favorites with young children.

ALEXANDER AND THE WIND-UP MOUSE
Leo Lionni

The friendship between a real mouse and a toy mouse is told in this sensitive story. Leo Lionni's collage pictures are especially nice in this book. Do give your children lots of opportunities to use collage materials.

THEODORE AND THE TALKING MUSHROOM
Leo Lionni

Another book about mice featuring Leo Lionni's lovely collage pictures.

ELEPHANT AND FRIENDS
Bernice Freschet

A drought is on the land and elephant leads his animal friends across the desert to a more fertile land. A story of friendship and courage to use with your students.

THE MOUSE'S WEDDING
Ruth Belov Gross

A fable about a mouse who wants to marry the daughter of the most powerful thing in the world. Check your Scholastic books. You may just have this one hiding away in a corner.

BABAR'S MYSTERY
Laurent De Brunhoff

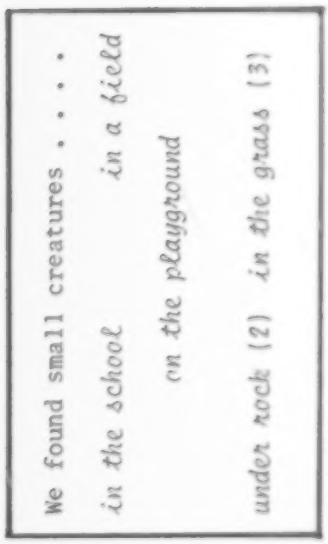
Any book about Babar, the friendly elephant king, is a favorite with children. If your students haven't met Babar, now would be a good time to introduce him.

Small Bug Theme

HAVE A SMALL CREATURE HUNT!

VISIT: A FIELD
A POND
THE PLAYGROUND

CREATE: A GRASSHOPPER DANCE
A BUTTERFLY DANCE



MAKE CHARTS FOR YOUR ROOM.

SOME EQUIPMENT YOU MIGHT WANT TO KEEP HANDY

old spoons for digging
tin cans for catching specimens
jars with punched lids
magnifying lenses
scissors

QUESTIONS TO THINK ABOUT AND EXPLORE:

- *What kinds of noises do they make? (humming, buzzing, chirping, singing, clicking, etc.)*
- *How do they move? (flying, hopping, jumping, diving, creeping, etc.)*
- *What kinds of animals live in the soil?*
- *What kinds of animals are on plants?*
- *Where were the small creatures found?*
- *Why do you think the small creatures were found in certain places?*
- *Was there more than one kind of animal food in the area?*
- *How can the small creatures be grouped?*
- *What are the differences between a cricket and a grasshopper?*
- *How does the small creature protect itself from its enemy?*
- *How many legs do the small creatures have?*
- *What foods do they eat?*
- *How can the small creatures be collected?*
- *Were some more difficult to collect than others?*
- *Do the young look like the adult?*
- *Do they live in a community or colony?*
- *How can they be grouped according to their body parts? (backbone, wings, legs)*

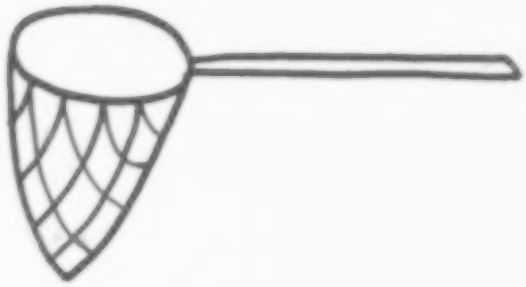
BE FLEXIBLE! Your trips outside the classroom may lead to more interesting things than small creatures.

CAPTURING SMALL CREATURES

Be sure to always include a bit of the plant or plants near the small creature so that it will have something to eat.

JARS: Use jars to scoop up bees, spiders, grasshoppers, etc.

NETS: Sweep the net over the insect; flip the bottom of the net over the top.



TONGS: Use tongs or tweezers. Some small creatures may cause a skin rash, if touched.

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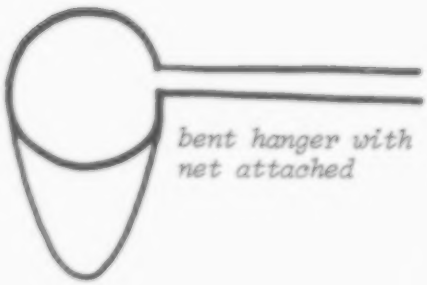
BRAINSTORM FOR:

-all the things children can think of that wiggle, hop, run, jump, etc.
-places one would find small creatures
-sounds that small creatures make
-ways small creatures move
-places one would not find a small creature
-what small creatures do

USE YOUR LISTS TO WRITE POEMS, CONTRASTING PATTERNS, STORIES AND TO DO CLASSIFICATION ACTIVITIES.

INSECT NETS

(Inexpensive, but Practical)



bent hanger with net attached

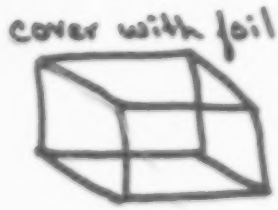
Muslin cloth or an old sheet sewn together

Nylon netting sewn together

top to an old stocking

TEMPORARY HOMES

Gallon jars



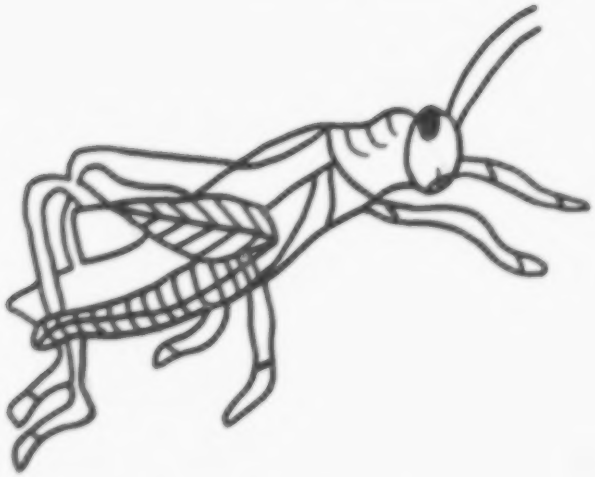
Old aquariums

Cardboard Food Cartons (cover openings with plastic or nylon stocking)

SMALL PETS FROM WOODS AND FIELDS by Margaret Buck has many ideas for making inexpensive cages

THE GOLDEN BOOK OF NATURE CRAFTS by John Saunders has directions for preserving specimens.

GOOD ECOLOGY TEACHING - Release a specimen after a day or two. The small creatures are needed for pest control, etc., and students can be helped in understanding a reverence for life. This also helps with the problem of providing food for the small creatures.



GRASSHOPPERS

The grasshoppers' most important sense organ is their feelers, since their compound eyes give them a broken picture of their surroundings. The "tobacco juice" the grasshopper spits out helps to protect it from its enemies. The sound a grasshopper makes comes from the legs. Grasshoppers can be kept in a jar or terrarium, along with fresh, green grasses or leaves. These should be changed daily.

MODEL THIS VOCABULARY FOR CHILDREN

antennae *membranes* *skeleton* *wings* *feelers* *spit*

hindlegs *forelegs* *compound eye*

-Estimate how far a grasshopper can jump.

-Measure the distances that various grasshoppers can jump.

-Compare the distance a grasshopper jumped with how far the children can jump.

-Watch a grasshopper eat, climb, etc.

-Look for empty grasshopper skins.

-Observe the strong, muscular legs and the weaker middle and front ones.

-Observe the grasshopper with a magnifying glass. Look for the compound eyes.

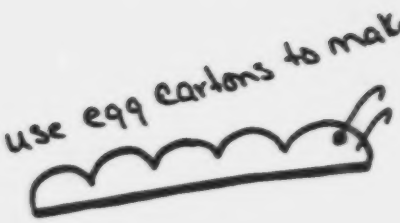
-Make up a grasshopper dance.

-Compare color, size, body parts, etc.

Use colored toothpicks, rods or sticks to demonstrate how the grasshopper's color helps to protect it. Place all green sticks down and ask children to close their eyes, while you add another green stick (the grasshopper). Ask children to find the grasshopper.

Read these poems to your class:
GRASSHOPPER GREEN, Anon.
THE GRASSHOPPERS, Dorothy Aldis

CATERPILLARS



MODEL THIS VOCABULARY FOR YOUR CHILDREN

cocoon	silk	pupae
spines	chrysalis	antennae

-Look at a caterpillar with a magnifying glass. Examine the body structures: legs, mouth, antennae, etc.
-Watch a caterpillar walk. How long does it take a caterpillar to move a certain distance?
-Let the CHILDREN crawl on their hands and arms. How does it feel?
-Watch the caterpillar eat. Is there any part of a leaf that they do not eat?
-Read these poems to your class: CATERPILLARS by Aileen Fisher
COCOON by David McCord
FUZZY WUZZY, CREEPY CRAWLY by Lillian Schulz
(You might want to use this poem to begin a study of endings.)
CATERPILLAR by Christina Rosetti

SOME BOOKS ABOUT CATERPILLARS:

The Caterpillar's Story Achim Broger	This book has lovely watercolor paintings. You might have children do their own watercolor paintings of caterpillars they have found.
The Very Hungry Caterpillar Eric Carle	Young children love this book!
The Longest Journey in the World William Barrett Morris Bill Martin Instant Reader	This story of a caterpillar's journey lends itself to many activities. Use it to develop concepts of space--by, under, through, etc. Put the phrases on cards and have children sequence them. -Make your own flannel board materials to accompany this story. As the story is read, children move the caterpillars over, under, etc. objects. -Have children make up their own journey. What would they go over, through, around? -Brainstorm for other creatures that would be going on a journey and then use the story as a pattern for children writing their own.
Ten Little Caterpillars Bill Martin, Jr. (Can also be found in Sounds of a Hound Dog by Bill Martin, Jr.)	This is a great one to build in a pocket chart. It begins...THE FIRST CATERPILLAR CRAWLED... Change the caterpillar to a different kind of small creature. Where would it go?

BUTTERFLIES

MODEL THIS VOCABULARY

adbomen thorax
feelers veins scales
compound eyes antennae

BOOKS

Butterflies
Wonder Starter Book

I Like Butterflies
Gladys Conklin

The Beginning Knowledge Book
of Butterflies

The Butterflies Come
Leo Politi

-Look at the veining in the wings. Compare the veins on several kinds of butterflies and moths.

-Compare the antennae of moths and butterflies.

-Observe the compound eyes with a magnifying glass.

-Observe the legs. How many are there?

-How are the forewing and hindwing different?

REFLECTIONS

A butterfly can be used to illustrate the mathematical idea of symmetry--one side of the butterfly corresponds with (reflected across a line) the other.

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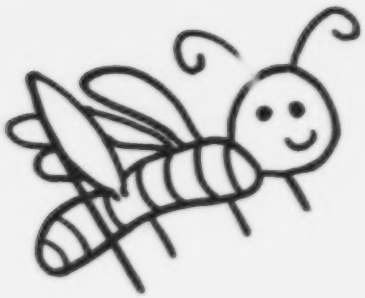
If you have pattern blocks and a small mirror, begin some studies of symmetry. What other materials can students use?



BEES

MODEL THIS VOCABULARY FOR CHILDREN

honeycomb hexagon honey
pollen queen worker wax
bumblebee drone hive honeybee nectar

- *Where is the best place to observe honeybees?*
- *Visit a place where honeybees are kept.*
- *Try to obtain honey in the comb. Let children break the comb and taste the honey.*
- *Watch a bee on a flower.*
- *Try to follow a bee to its hive.*
- *The cells of a honeycomb are hexagon shaped. What other things are this shape?*
- *The hexagon shape of the honeycomb fit together. Get out your pattern blocks and have children find the hexagon shape. Can they make a pattern with just this shape? If you don't have the blocks, make the hexagons from paper.*

POEMS

THE BEES
Lola Ridge

ONCE I SAW A BEEHIVE
(fingerplay)

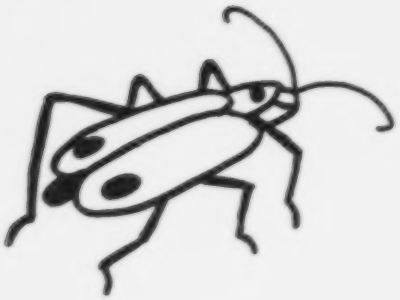
MOVE OVER
Lillian Moore

BOOKS

BUZZ, BUZZ, BUZZING BEES
Gene Fulks

Play "The Flight of the Bumblebee" by Rimsky-Korsakov. This might be a good piece to combine an art project along with the music. Let children do finger-painting as they listen to the music.

Craft stores often stock sheets of beeswax. If you can't get any honeycomb, this may work as a substitute.



BUGS

Ladybug, ladybug,
Fly away home!
Your house is on fire,
Your children will burn!

Mother Goose

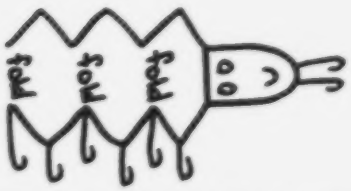
Can your class make up small creature riddles?

Encourage children to bring in specimens!

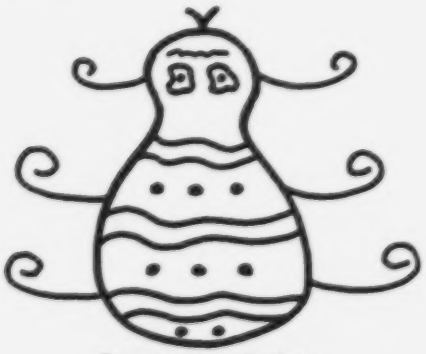
A five-minute trip with three or four students is more beneficial than 30 minute ones with 20 or 30 students. It's easier to pick up on children's comments and expand them if you have a small group.

Write stories or poems about your bug.

CREATE A BUG



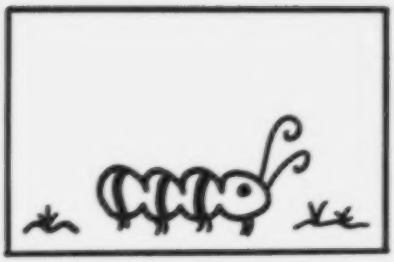
Construction paper folded to make a worm.



Crayon or Paint

Put dabs of paint on one half of a sheet of drawing paper. Fold the paper in half and press. Open the paper. Give children more than one opportunity to work with this technique. You will be surprised at the level of sophistication children achieve, if given the opportunity to practice.

MORE IDEAS FOR DESIGNING BUGS!



CRAYON RESIST

Watercolor wash over crayon drawing.

Can children draw, paint, color a bug as close as possible to the real animal?

STONE SCULPTURE

Paint smooth stones with acrylic paints. If you are gluing stones together, put a small piece of cotton between them along with the glue. It will help provide a better bond.

"BUGS"

by Margaret Wise Brown

Build this poem in the pocket chart, using sentence strips. Then brainstorm with the children for other kinds of bugs and have them write their own version using "Bugs" as a frame.

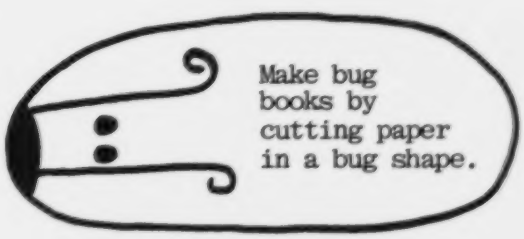
My bug is a _____.

It eats _____.

It can _____.

MELTED CRAYON BUGS

Put crayon shavings on a piece of drawing paper. Cover them with a piece of wax paper and a newspaper. Iron. Lift off the newspaper and wax paper.



CLASSIFY bugs by — color — size — shape — movement — number of legs, wings

Keep a class record of where bugs were found and who found them:

Bug or Small Creature	Who found it	Where it was found
Ant	John	sidewalk
Bee	Jane	her house
Snake	Susan	in the grass

Have you sung --

EENSY, WEENSY SPIDER

with your class lately?

Brainstorm with children for all the kinds of bugs they can think of.

Watch a spider build its web.

Run a finger over the outer strand of a spider web. Then run a finger over the other threads. Is there a difference?

Examine a web with a magnifying lens.

How many different kinds of webs can children find?

Compare various kinds of beetles. How are they different or the same?

Are all ladybird beetles the same?

How do the patterns of veining in the fly differ from that of a grasshopper or butterfly?

How many wings does a fly have?

Can children find the compound eyes in the insects that they find?

What are all the stories that have bugs in them?

Name all the things that "drive you buggy."

Don't forget to use Marlene McCracken's, "Questions for Classification" sheet.

Help children see the relationship between color of a flower and the fact that it is visited by bees and other insects.

Before going out on walking trips to look for small creatures, be sure to check with parents to see if any children are allergic to insect bites.

POEMS

THE ANT AND THE CRICKET
adapted from Aesop

SONG OF THE BUGS
M. W. Brown

A DRAGON-FLY
Eleanor Farjeon

FIREFLIES
Carolyn Hall

CRICKETS
Harry Behn

FIREFLY
Elizabeth Madox Roberts

JUNGLES OF GRASS
Aileen Fisher

MRS. BROWNISH BEETLE
Aileen Fisher

SMALL HOMES
Carl Sandburg

LIKE A BUG
Aileen Fisher

UPSIDE DOWN
Aileen Fisher

BUG WORDS
Alastair Reed

LITTLE BLACK BUG
Margaret Wise Brown

Make a collection of poems--use a card file, charts, etc.

USE POETRY - - -

. . . for the sheer enjoyment of the sound and rhythm

. . . as patterns for their own writing

. . . to model language

. . . to communicate a different way of looking at an animal

Illustrate poems with various art media and techniques.

Write poems on charts and read them often with your students.

After reading these poems with the children, brainstorm for things that a bug can and cannot do; things that a bug can do but children can't do; or things that children wish they could be but can't.

Look for other words that have bug in them. Make a list to hang on your wall.

Brainstorm for other insects and small creatures and add other verses to these poems.

Poems could be used for building a pocket chart or developing a book form.

Children might want to illustrate poems with watercolors or wet chalk media.

HEY, BUG!
Lilian Moore

Perhaps children could pantomime this poem. Try reading this poem with different intonations as though you are trying to coax the bug to stay as it leaves.

LITTLE BUG
Rhoda W. Bacmeister

Brainstorm for things that are tiny like a bug. Marlene McCracken holds up a small square of paper and asks children to think of things that could fit under the paper. Make a list of all the things children suggest. You might want to use this frame:

A _____ is as tiny as a _____.

THE ANT VILLAGE
Mariod Edey and Dorothy Grider

Look for an ant village. Compare what happens in this poem to what happens when an ant home is disturbed.

BOOKS

ONCE WE WENT ON A PICNIC
Aileen Fisher

As children go on a picnic, they notice all kinds of things; a beetle, flowers, crickets, etc.

You might compare the things children find on a walk with the things the children found on their picnic.

WHERE DOES EVERYONE GO?
Aileen Fisher

A great book to use at this time of year. As you look for small creatures, draw children's attention to the fact that some are no longer seen, but were very visible in the summer. This book will help to answer questions.

HEY, BUG! AND OTHER POEMS ABOUT LITTLE THINGS
Elizabeth M. Itse
American Heritage Press

INSECTS BUILD THEIR HOMES
Gladys Conklin

Clearly illustrated and easy reading.

THE TALL GRASS ZOO
Winifred and Cecil Lubell

MY LADYBUG
Herbert H. Wong and
Matthew F. Vessel

Children will enjoy reading about the many forms of ladybugs. The pictures are lovely and very clear.

HOP, SKIM AND FLY
Ross E. Hutchins

This is a book for third graders and above.

DRAGONFLIES
Hilda Simon

This is a good teacher reference book.

LADYBUG
Robert M. McClung

THE FIRST BOOK OF BUGS
Margaret Williamson

A DOG'S BOOK OF BUGS
Elizabeth Griffin

This author classifies bugs many different ways. Use some of these categories for classification activities.

A POCKETFUL OF CRICKET
Rebecca Caudill

A small boy who goes for a walk, finds a cricket and takes it home to be his friend.

WHY MOSQUITOES BUZZ IN PEOPLE'S EARS
Verna Aardema

Enjoy not only this story but also the beautiful illustrations. Mosquito tells iguana a story that sets off a chain reaction.

GOOD NIGHT, MR. BEETLE
Leland B. Jacobs

Another great book for building in the pocket chart. Kindergarten teachers use pictures along with the words--Good night.

THE LITTLE SQUEEGY BUG
Bill and Bernard Martin

The story of a little bug who climbs a cattail hoping to find a way to become a bumblebee.

WE LIKE BUGS
Gladys Conklin

SNAKES

THE SNAKE
Karla Kuskin

THE SILENT SNAKE
Anon.

BOA CONSTRICTOR
Anon.

THE SNAKE THAT SNEEZED!
Robert Leyderfrost

Is a snake's skin moist? Feel it - you may be surprised!

Use an old sock to make snake puppets.

SNAILS

Snails move by extending and withdrawing into their shell a muscular foot. The foot secretes a mucus which enables the snail to move easily. There is an eye-spot on the top of the longest tentacle.

Collect some snails. They can be kept in a large jar or terrarium.

Place snails on a piece of dark paper and observe the mucus trail. Does each snail make the same pattern on the paper?

Watch the snails as they move, breathe and eat.

Compare snail shells with other types of shells.

Experiment with different kinds of leafy vegetables to find out which ones snails like.

Share these poems with your class: LITTLE SNAIL by Hilda Conkling
SNAIL by David McCord
THE SNAIL by James Reeves
THE SNAIL by William Cowper

YOU CAN FIND A SNAIL by Patricia K. Miller and Iran L. Seligman is a good book for young children.

The observation of a snail can lead to the study of spirals. How many ways can children find to use a spiral? You might start a collection of things that have spirals - some baskets are made in a spiral, a nautilus shell is another spiral.

WORMS

Worms belong to a group of animals which have segmented bodies. Earthworms have no eyes or legs. They move by extending and contracting their bodies. One can sometimes find castings of excess dirt left by the worm as it burrows into the soil.

THE WORM by Ralph Bergengren

MODEL THIS VOCABULARY FOR THE CHILDREN			
burrows	soil	segments	locomotion
extending	contracting	castings	bristles

Touch a worm. How does it feel? Is it moist or dry?

Where can earthworms be found? What else lives there?

Observe an earthworm with a magnifying glass.

Find out if an earthworm can move on both a smooth and a rough surface.

What does an earthworm eat?

When is the best time to find worms? Experiment in various kinds of weather.

Observe how an earthworm moves. Can the children mimic this?

What happens to a worm if it is left out of the soil?

Look for worm castings.

Observe a worm burrowing into the soil.

Take a poll among students to find out who likes or dislikes worms.

Explore how worms fit into the interdependence of life.

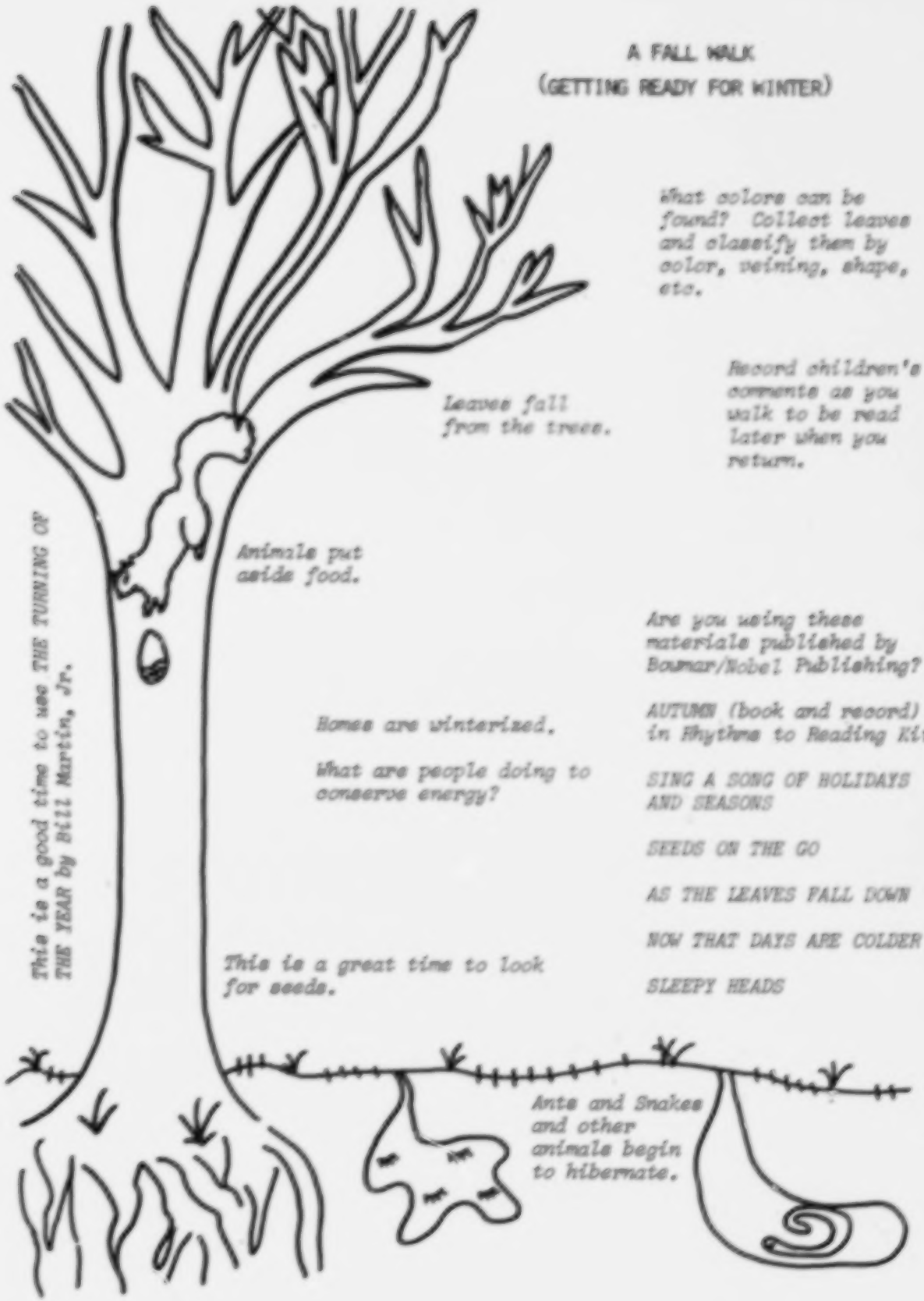
How are worms beneficial? Harmful?

WE FOUND EARTHWORMS

	sidewalk	puddle	grass	under a rock
after a rain	111		1111	
on a sunny day	1			
on a cloudy day				

Queasy about holding earthworms? The book, SCIENCE EXPERIENCES FOR THE EARLY CHILDHOOD YEARS by Jean Durgin Harlan has numerous ideas for handling small creatures, including one about holding the animal in the palm of your hand where there are fewer nerve endings.

A FALL WALK
(GETTING READY FOR WINTER)



What colors can be found? Collect leaves and classify them by color, veining, shape, etc.

Record children's comments as you walk to be read later when you return.

Leaves fall from the trees.

Animals put aside food.

This is a good time to use THE TURNING OF THE YEAR by Bill Martin, Jr.

Are you using these materials published by Bowmar/Noble Publishing?

AUTUMN (book and record) in Rhythms to Reading Kit

Homes are winterized.

What are people doing to conserve energy?

SING A SONG OF HOLIDAYS AND SEASONS

SEEDS ON THE GO

AS THE LEAVES FALL DOWN

NOW THAT DAYS ARE COLDER

SLEEPY HEADS

This is a great time to look for seeds.

Ants and Snakes and other animals begin to hibernate.

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From October 1979 Notes to Fort Yates Follow Through staff, pp. 2-20.

Turkey Theme

The wild turkey is a native to North America. It is considered by some to be the most intelligent of the game birds.

HOW DID A TURKEY COME TO BE CALLED A "TURKEY"?

Here's one story. Can you find others?

In England "turkey" meant a guinea fowl which had been imported from Turke[illegible]. When people from England came to the United States, they saw a bird which resembled their guinea fowl and called it a "turkey".

Make hand turkeys. Who can make the largest one? Measure the hand turkeys by cutting out tracings of hands and placing one over the other.

The wild turkey is a member of the pheasant family.

From November 1979 Notes to Fort Yates Follow Through Staff, pp. 2-12.

WILD TURKEY

1. Tips of feathers are dark brown,
2. Slender-bodied, long-legged.
3. Has no wattle.

DOMESTIC TURKEY

1. Tips of feathers are white.
2. Fuller-bodied, short legs.
3. Has a red wattle.

Did You Have Turkey?		
Name	yes	no

GRAPHS: DO YOU LIKE TO EAT TURKEY?
DID YOU EAT TURKEY AT YOUR HOUSE OR SOMEONE ELSE'S HOUSE?

Take a poll among your students. Show them a picture of a live turkey, one that has been prepared for market (frozen and wrapped) and a cooked one. Do they know that all three are the same bird? You may be surprised at their answers.

Can anything in the classroom be found to equal the weight of a turkey? For example, if a turkey weighed 15 pounds, how many books (or blocks) would equal that amount? Might a turkey weigh as much as a child in the classroom? How many children weigh more or less than a turkey?

How much does a turkey cost? Compare newspaper advertisements for turkeys from various stores. Which store has the best buy?

What would your students buy for Thanksgiving dinner? Make use of the newspaper advertisements to plan and purchase items for the meal. Allow students a specific amount of money that can be used to purchase items for the dinner.

You'll get a lot of math and reading practice from this activity.

SOME QUESTIONS TO EXPLORE WITH CHILDREN---

1. *What color are turkeys?*
2. *Can turkeys fly?*
3. *How are domestic and wild turkeys alike? Different?*
4. *Do turkeys lay eggs like hens?*
5. *Do turkeys make any noise?*
6. *What do turkeys eat?*
7.
8. *WHAT QUESTIONS CAN YOU ADD TO*
9. *THIS LIST?*
10.

Some poems your students will enjoy:

THE LITTLE GIRL & THE TURKEY
by Dorothy Aldis

THANKSGIVING
by Margaret Hillert

WHAT THE LITTLE GIRL SAID
by Lee Blair

BRAINSTORM FIRST FOR . . .

how a turkey (or other bird) looks?	how a turkey moves?	where a turkey could be? (or hide)

Then USE these poems as frames for writing your own . . .

1. FIVE LITTLE CHICKENS - Anon.

   Children could put each verse on a page, illustrate it and make a class book of their poem.

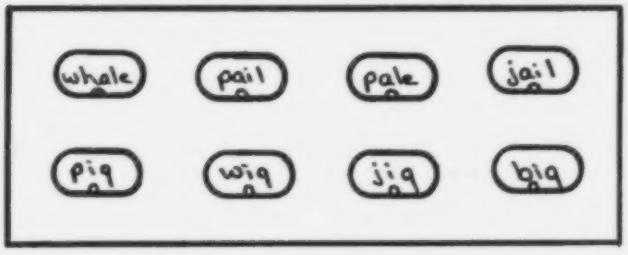
   Said the first fat turkey with a low, little moan
   Oh, I wish I could find to hide me
   A fine enormous stone.

2. THE FAMILY - Rose Fyleman

   This poem begins - *"Widdy - widdy - wurkey*
   Is the name of my turkey;"

   It's a great poem to use along with Marlene McCracken's "Forever Chart."

   a. First brainstorm for words that rhyme with whale, fox, cat, dog, etc.
   b. Take a large piece of paper, cut slits for the words and insert a paper clip into the slit.



GREAT FOR WRITING COUPLETS!!!!!!

3. TURKEY TIME - Dean Hughes

   This is a great poem for chanting! Try a clapping rhythm along with it and you'll have great fun. What other things can your students come up with that are made from turkey?

   USE these frames for writing . . .

   A _____ *is not as big as a turkey. A turkey is bigger than a* _____.

   A _____ *is bigger than a turkey. A turkey is not as big as a* _____.

4. ROSIE'S WALK - Pat Hutchins

Read this story to your students and then change it to a turkey's walk.

"Rosie, the turkey went for a walk . . ."

Who can be chasing Rosie?

Where would Rosie walk?

This is a book that uses many prepositional phrases. Help children to understand the meaning of the phrases by . . .

-acting out the story

-using a flannelboard and figures

Put the words of the story on cards and let children rebuild the story. Children could make their own books about Rosie, the turkey.

5. I LIKE FALL - Aileen Fisher

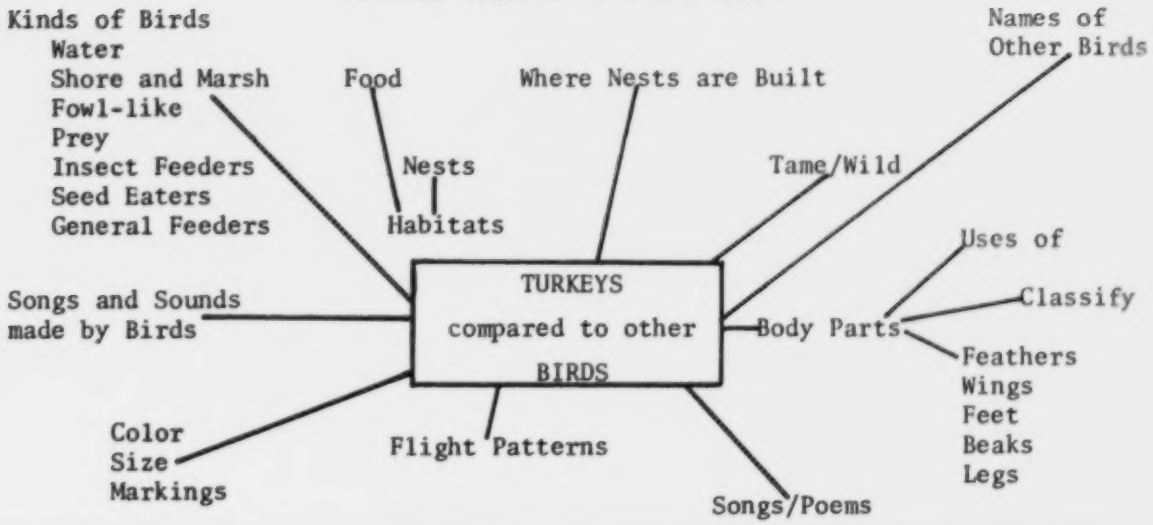
Change this to:

I like Thanksgiving:
it always smells . . .

This is a good start for a brainstorming session.

Write this poem and your new one on a chart and read both often.

COMPARE TURKEYS TO OTHER BIRDS



Bring in leg bones from a turkey and a chicken to use for comparison. How are they alike? How are they different?

Measure them by direct comparison and with tape measures.

TANGRAMS

What other birds can they make?

Can your students make these bird shapes with their tangrams?

Have them trace their bird shapes and place them on a painted background.

THE BEGINNING KNOWLEDGE BOOK OF BACKYARD BIRDS

This book has colorful pictures of birds, their nests and eggs along with an easy-reading text.

CHARACTERISTICS COMMON AMONG BIRDS

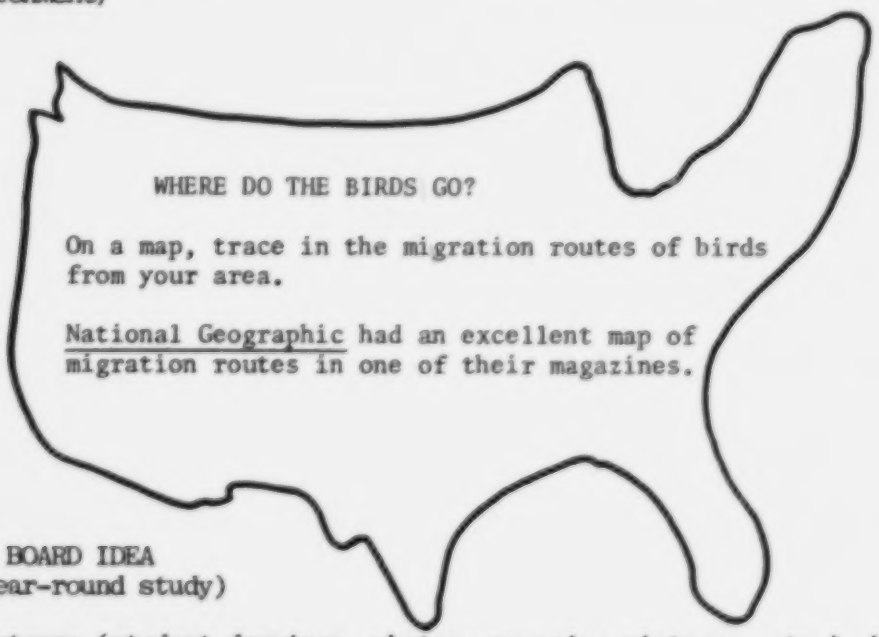
Can your students come up with characteristics by observing various birds?

1. Can fly
2. Have an internal skeleton and feathers for body covering
3. Have one pair of legs and one pair of wings for locomotion
4. Have bills
5. Hatch from eggs
6. Are warm-blooded (maintain a steady body temperature different from their environment)

Observe the school grounds for a short time to discover areas where birds congregate. How many different kinds can be seen?

Make a map of the school grounds and mark places where birds congregate. Correlate this with need for food, water and shelter.

How long can your students keep a feather in the air? Use a down feather and have several students blow it around. Can they keep it from falling to the ground?



WHERE DO THE BIRDS GO?

On a map, trace in the migration routes of birds from your area.

National Geographic had an excellent map of migration routes in one of their magazines.

BULLETIN BOARD IDEA
(for a year-round study)

Using pictures (student drawings, photos, magazine pictures, etc.), books, student reports, graphs and lists, display information about birds.

1. Which birds from your area migrate?
2. Which birds stay?
3. Which are the first to return in the spring?
4. Which are not common to the area but are on the flyway?

Filling The Bill

by

Aileen Fisher

Borrar Nature Series

The Way of Animals

1973

On a farm we saw a hen.
We watched her . . .

In the woods we . . .
We saw his bill . . .

In the bay . . .

This is a great book to use. Aileen Fisher focuses in on not only birds' bills but also the various habitats of birds. Use this book along with your CLASSIFICATION activities.

Use the frame of this poem for writing your own class poem.

THE REASON FOR THE PELICAN by John Ciardi is a poem to use when talking about bills.

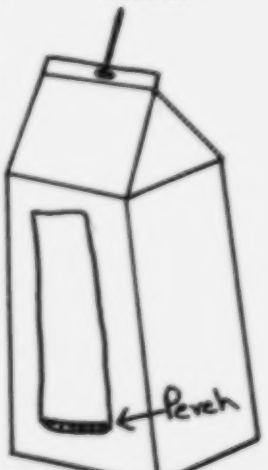
What kind of bill and feet does a TURKEY have?

Classification activities

COLLECT A SERIES OF PICTURES AND GLUE THEM TO INDEX CARDS. NATIONAL WILDLIFE STAMPS AND OLD MAGAZINES FROM THE LIBRARY ARE GOOD SOURCES OF PICTURES. YOU MIGHT WANT TO PREPARE FOUR SHEETS OF PAPER EACH WITH A DRAWING OF A BILL OR FOOT. CHILDREN SORT THE PICTURES AND PLACE THEM ON THE CORRECT PAPER. YOUR SETS OF PICTURES CAN ALSO BE SORTED BY:

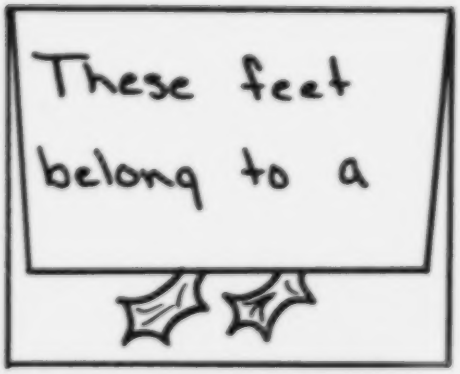
HABITAT OF BIRD
COLOR
SIZE

MILK CARTON BIRD FEEDER



Make a perch with a straw or dowel.

(Observe which birds come to your feeder.)



Make up puzzle books like this using feet, bills, tails, etc.

Children can make up their own puzzle books.

When you lift the flap, the complete picture tells one if they are right!

USING A FEATHER COLLECTION

Gather a small group of children about a collection of feathers. Here are some questions to explore:

-Is every feather the same?

-If you have feathers from the same bird, are they all the same?

-What part of the bird did the feathers come from? Wing? Tail? Body?

-How can the feathers be grouped? Size, color, wing feathers, body feathers, etc.

-Do all parts of a feather feel the same?

USEFULNESS OF FEATHERS

1. ACT AS INSULATORS TO KEEP IN BODY HEAT.
2. PROVIDE COLOR PROTECTION.
3. OIL IN FEATHERS SHED WATER.
4. WING AND TAIL FEATHERS HELP BIRDS FLY.

A ZIPPER, YOU SAY?! COLLECT FEATHERS FROM OUTSIDE OR FROM OLD HATS, ETC. LOOK FOR THE HOLLOW TUBE IN THE FEATHER AND FOR THE FINE FEATHERS BRANCHING FROM THE TUBE. THESE INDIVIDUAL FEATHERS ARE HOOKED TOGETHER LIKE A ZIPPER. HAVE CHILDREN PULL THE INDIVIDUAL BRANCHES APART AND ZIP THEM BACK TOGETHER. USE A MAGNIFYING GLASS TO OBSERVE THE SMALL BARBS ON THE TIP OF EACH BRANCH.

BIRDS ARE BILATERALLY SYMMETRICAL. SO SOME OF THE FEATHERS YOUR CHILDREN FIND WILL BE FROM THE RIGHT OR LEFT SIDE OF THE BIRD. CAN YOUR STUDENTS TELL WHICH SIDE OF THE BIRD THE FEATHER CAME FROM? IT ALSO MEANS THAT IF A BIRD LOSES A FEATHER FROM HIS RIGHT SIDE HE WILL ALSO LOSE ONE FROM HIS LEFT. DO SOME SYMMETRY ACTIVITIES WITH THE KIDS - BLOTTO PAINT DESIGNS ARE FUN AND PATTERN BLOCKS AND MIRRORS WORK WELL, TOO.

Observe birds in flight. Have children use their arms to demonstrate flight patterns of birds

Allow children to stand by windows to draw and take notes on the behavior of birds.

Contrast color areas of birds

spots at tip of tail
bars on wings or tail
rump patch
top of head
streaked or plain back
breast (plain, speckled, streaked, spotted)
throat

CAN YOU SEE BIRDS DOING THESE MOVEMENTS?

DIPPING
SOARING
GLIDING
WHIRLING
UNDULATING
BUZZING

GREAT WORDS TO MODEL FOR CHILDREN. HAVE CHILDREN DEMONSTRATE THE MEANING OF THESE WORDS WITH MOVEMENT ACTIVITIES.

Many people have used feathers. How have people in your area worn feathers? Do they use feathers for any purpose today?

Quill pens, made from a long flight feather, were used in the past for writing. Some of your students may like to try making a quill pen. Cut on an angle the tip of the feather. Cut a slit in the tip to allow it to spread when pressure is applied.

These books will give your students more information on birds:

1. Life Nature Library: The Birds
2. Science Activities for Elementary Children by Nelson and Lorbeer
3. Elementary Science Handbook for the Elementary Schools of North Dakota, Dept. of Public Instruction, June 1961.
4. The Audubon Magazine
5. Investigating Science with Children, Vol. 1, Living Things, National Science Teacher Ass'n., 1973.

Older children might enjoy finding words to mean a collection of birds:

a gaggle of geese
a bevy of quail
a flight of doves

_____
_____
_____

THERE ONCE WAS A PUFFIN by Florence Page Jacques

This is a bird poem most children enjoy reciting. It's an easy one to make up hand actions for - let children help you do this.

Have you thought of having children illustrate this poem with paint, cloth or chalk? A mural might be fun to do.

BOBBIN-A-BOBBIN by Laura Richards

Brainstorm for things a bird can and cannot do. Use this frame . . .

"I can _____, but a bird cannot _____."

Try these poems with your class . . .

WOODPECKER - Anon.

TWO LITTLE PIGEONS - Anon.

MRS. PECK-PIGEON - Eleanor Farjeon

PARROT - William Jay Smith (a fun poem that children love)

THE DUCK - Ogden Nash

TO BE A DUCK - Aileen Fisher

SOMETHING TOLD THE WILD GEESE - Rachel Field

A LITTLE TALK - Anon.

HOUSES

Everyone has a house . . .

A House for Everyone
by Betty Miles

This easy reading book which can be adapted for all grade levels will give you some good ideas for take-offs.

A house is for. . .
Some houses are _____ and _____.
People live in houses.
In this house lives _____.

Along with this book read "A House" by Charlotte Zolotow.

Come Over To My House
by Theo. LeSieg

A beginning reading book which shows many different homes from all over the world. This book might be a start for some discussion of what life would be like if we lived in one of the pictured houses.

BRAINSTORM FOR WHO LIVES WHERE:

PIG	PEN/STY
FOX	DEN/LAIR
BIRD	NEST
LION	DEN
HORSE	STABLE
BEAVER	LODGE
SNAIL	SHELL
BADGER	BURROW
BOY	HOUSE

USE YOUR LIST FOR CLASSIFICATION ACTIVITIES, WRITING ACTIVITIES.

In My Mother's House
Ann Nolan Clark

A sensitive book with a wonderful pattern.

A House is a House for Me
by Mary Ann Hoberman

A beautiful book that will provide many opportunities for language, both oral and written. It begins. . .

A hill is a house for an ant, an ant,
A hive is a house for _____ _____.
A hole _____ _____ _____ _____ _____ _____
And a house is a house for me!

Homes by Ilo Orleans is a fun poem to use at this time. Use your above list along with the frame of this poem for writing your own.

A ___ lives in a ___;
A ___ lives in a ___;
A ___ lives in a ___;
But living in a ___
Appeals to ___ ___ ___.

DO YOU KNOW?
Ethel M. Wegert

A poem which uses a question format. Have children choose their favorite verse, write it on paper and on the reverse side draw the answer. Put the pages together to make a book. Perhaps children might want to use this frame for writing their own.

From April/May 1980 Notes to Fort Yates Follow Through Staff.

Animal Homemakers
Platt & Munk, Publishers

This paperback book has lovely illustrations showing the interiors of various animal homes. The easy-to-read text gives some information about the homes.

WHERE IS HOME?
Beth Clure & Helen Rumsey
Bowmar Manipulative Book

Use the repeated pattern and format of this book in making your own.

Young children will enjoy this book. Perhaps older children could make some books for the kindergarten after they have studied about animal homes.

. . . . . .

SOME SPECIAL BOOKS YOUR CHILDREN WILL ENJOY

Six Special Places
Monica De Bruyn

Three children look for a special place of their own. They try a snow cave (melted when spring arrived), a cave made of blankets and chairs (chairs were needed for dinner) and various other locations. Each time something happens to their "special place."

THE BOY WITH MANY HOUSES
INGER & LASSE SANDBERG

MATTHEW WANTED TO BUILD A HOUSE OF HIS OWN, SO HE PILED HIS BLANKETS, TOYS AND PILLOWS INTO HIS WAGON AND BEGAN TO LOOK FOR A PLACE. HOWEVER, WHEREVER HE BUILT HIS HOUSE, HE CAUSED CONFUSION BECAUSE IT WAS IN SOMEONE'S WAY. FINALLY, HIS OLDER BROTHER HELPS MATTHEW BUILD HIS HOUSE IN THE PERFECT PLACE.

We Were Tired of Living in a House
Liesel Moak Skorpen

This story begins . . . We were tired of living in a house
So we packed a bag with. . .

A cumulative story about four children looking for a place to live. Use the frame to help children tell about what they like about their own homes.

I like my house.
It's warm and cozy in the winter.
We sing and laugh together.
We share the warmth of the fire.
I like my house.

What might various animals say about why they like their houses?

Some other books you may want to use for a theme on Houses:

LET'S FIND OUT ABOUT HOUSES
Martha and Charles Shapp

THE TRUE BOOK OF HOUSES
Katherine Carter

BENJY'S DOG HOUSE
Margaret Bloy Graham

SOMEBODY'S HOUSE
Edith Thacher Hurd

A VERY SPECIAL HOUSE
Ruth Krauss

THE BIGGEST HOUSE IN THE WORLD
Leo Lionni

ANIMAL HOUSES
Aileen Fisher

THE DEAD TREE
Alvin Tresselt

WHERE DO YOU LIVE?
Marlene & Bob McCracken

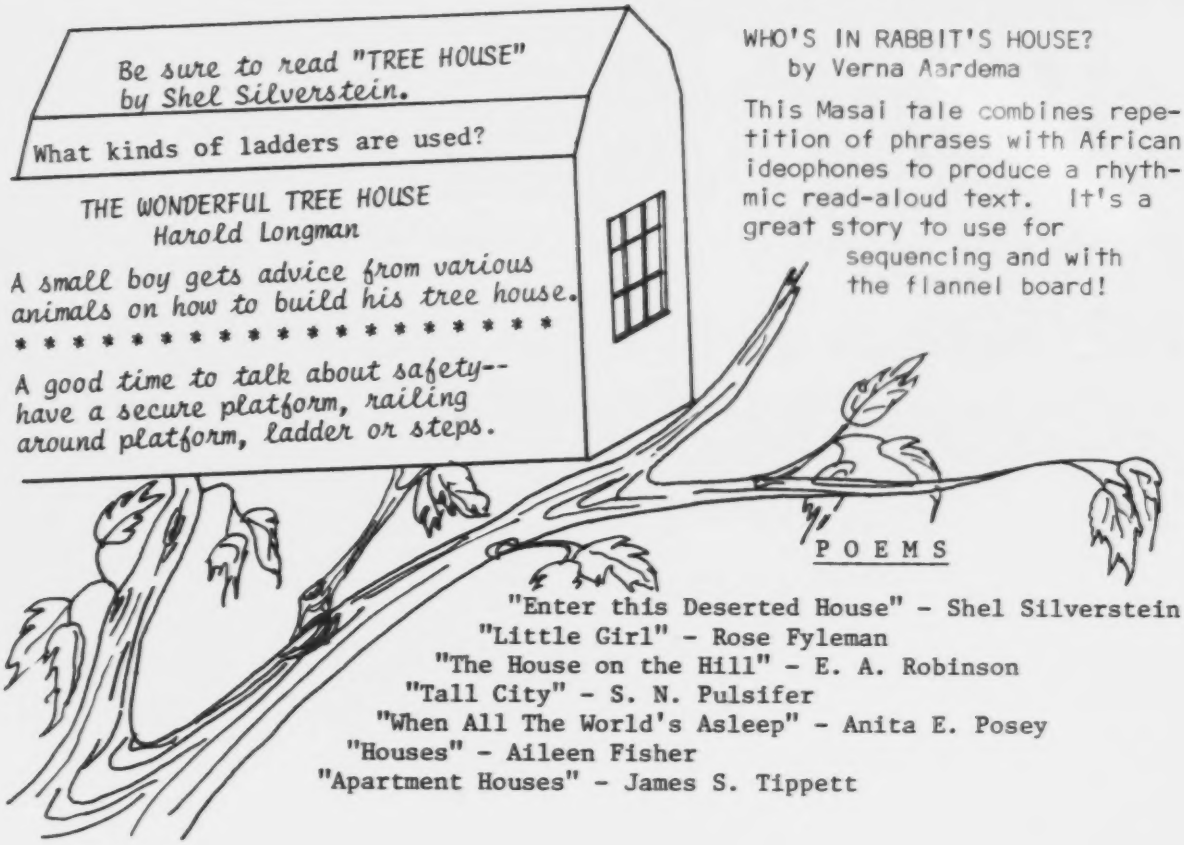
WHAT WILL HOMES BE LIKE IN THE FUTURE?

Think about energy, recreation, food production and safety.
Encourage children to draw or build model homes of the future.
Help them to verbalize why they designed their homes the way they did.
This is a good time to talk about energy, insulation, alternate forms of energy, etc.
Another question to consider is how life-styles influence the type of homes we have.

Look at some floor plans of houses. It may help children to better visualize the basic shape of homes. Better yet, take some walks around houses to get an idea of shapes.

THE LITTLE HOUSE
Virginia Lee Burton

A small house watches the changing seasons and skyline as a city is built up around it. As you read this book with the children, spend some time looking at the pictures and talking about the subways and skyscrapers. Another discussion topic coming from this book is that of house moving.


Be sure to read "TREE HOUSE" by Shel Silverstein.
What kinds of ladders are used?
THE WONDERFUL TREE HOUSE
Harold Longman
A small boy gets advice from various animals on how to build his tree house.
* *
A good time to talk about safety--have a secure platform, railing around platform, ladder or steps.

WHO'S IN RABBIT'S HOUSE?
by Verna Aardema

This Masai tale combines repetition of phrases with African ideophones to produce a rhythmic read-aloud text. It's a great story to use for sequencing and with the flannel board!

POEMS

"Enter this Deserted House" - Shel Silverstein
"Little Girl" - Rose Fyleman
"The House on the Hill" - E. A. Robinson
"Tall City" - S. N. Pulsifer
"When All The World's Asleep" - Anita E. Posey
"Houses" - Aileen Fisher
"Apartment Houses" - James S. Tippett

"The City Mouse and the Garden Mouse" by Christina Rossetti lends itself to illustration. Have children divide their papers in half. On one half, have them picture the Garden Mouse's house and on the other half, the City Mouse's house. The verses of the poem could be lettered onto the pictures. You could also do some brainstorming with the children about what the two mice might see from their windows. Along with this poem use one or all of the following:

"Wanted" - Rose Fyleman
"I Wouldn't" - John Ciardi
"The House of the Mouse" - Lucy Sprague Mitchell
"The Mouse's House" - Pat Day

Don't forget to also read Aesop's fable about the City Mouse and the Country Mouse.

Besides having children draw what the City Mouse and the Country Mouse might see from their windows, why not have the children draw or paint what they see from their favorite window in their house?

*houses*houses*houses*houses*houses*houses*houses*houses*houses*houses*houses**

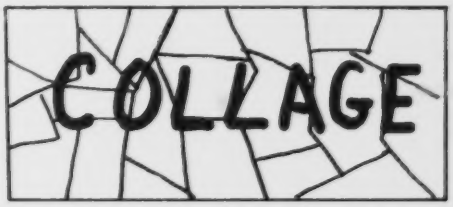
PHOTO COLLECTION

MAKE A PHOTO COLLECTION of homes. Take a walking trip (bring a camera with you) and take pictures of children's homes or homes built in certain styles. Use your pictures to extend vocabulary, to develop classification skills and to heighten observation skills.

What clues are there that will give children an idea of the age of a home?

Where can they go to find out how old a house is?

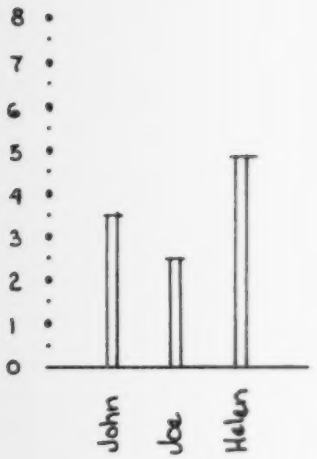
Help children to hypothesize why homes were built in their present locations, why they were built in a particular style, or even about the people who built them. There won't be any right answers, but you will be helping children to use the data and knowledge they have to form generalizations.

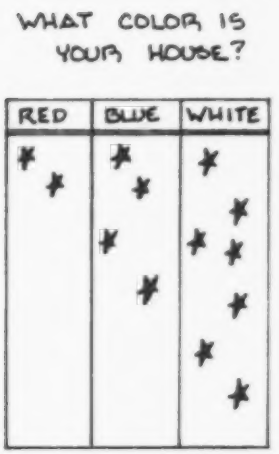


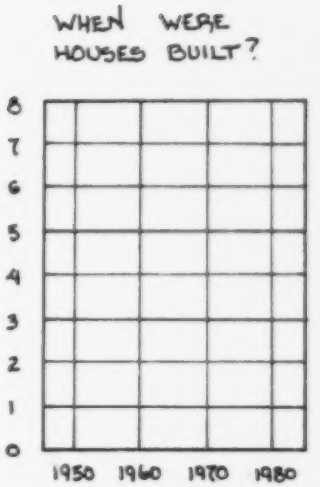
MAGAZINES HAVE LOTS OF PICTURES OF HOUSES. HAVE YOUR CHILDREN FIND AS MANY DIFFERENT KINDS AS POSSIBLE TO MAKE INTO A COLLAGE ABOUT HOUSES.

MAKE A SERIES OF PICTURES SHOWING LAND CHANGES AROUND A HOUSE. THIS MIGHT HAVE TO DO WITH SEASONS OR CHANGES FROM ONE ERA TO ANOTHER.

GRAPHS help children ORGANIZE information.







Graph the outside colors of homes, how many people live in a house, sizes of houses, shapes of homes, materials from which a house is constructed, favorite places at home.

Use your graphs to help children see RELATIONSHIPS. COMPARE and CONTRAST THE INFORMATION. Have children write statements about the relationships they see. Place the statements near the graphs so they can be shared by everyone.

If it would be possible, show the children a deed for a home. Many children are probably not aware of what a deed is.

As you walk and talk with children, model vocabulary appropriate to the theme of houses: gutters, siding, door frame, beam, joints, lintel, shingles, rafter, sill, etc.

MORE IDEAS AND THOUGHTS ON GRAPHS IN PICTORIAL REPRESENTATION, NUFFIELD MATHEMATICS PROJECT, JOHN WILEY AND SONS, INC., N.Y. (YOU PROBABLY HAVE A COPY OF THIS IN YOUR SCHOOL.)

MAPPING SKILLS

Draw a large map of the school area. Include streets, etc. Have children make models of their homes (milk cartons work well) and place them on the map. Flags or some other type of marker could also be used. This will help children to see their home in relation to everyone else's.

Help children to become more observant. Have children pick out a house. Draw it from memory and then take the children outside to sketch the house while looking at it. Compare the two drawings. Try this yourself. You may be very surprised at the results.

TRY TO GET A MAP OF THE AREA FROM THE COUNTY OFFICE. HELP CHILDREN FIND THEIR HOMES ON THE MAP.

MAKE A MURAL

ASK CHILDREN TO SKETCH THEIR HOMES FOR A HOMEWORK ASSIGNMENT. BRING THE DRAWINGS TO SCHOOL AND PLACE THEM ON A MURAL. USE PAINT, CHALK AND CRAYONS FOR THE BACKGROUND. LABEL THE HOUSES WITH CHILDREN'S NAMES.

Have children record what they see each day on the way to school. If you do this for a week or two, you can encourage children to look for new things.

ANOTHER KIND OF MURAL

Make two pictures of a house. Under one write "25 Years Ago;" under the other write "Today." You may also want to do one for 50 years ago. Now add cars and things to show the changes that have taken place. Older students will be able to do a lot of research to show how items have been added or changed.

INTRODUCING ANIMAL HOMES

(SOME THOUGHTS FROM MARLENE MCCRACKEN)

Begin by brainstorming with the children for animals they know. Elicit at least one hundred animals. As you are brainstorming and recording the animal names on the chalkboard, have your aide or a child record the animal names on flashcards. Children chant all names at least once.

Then brainstorm with children for where these animals might live or what sort of places or houses these animals live in. Place their responses on cards and tape on the chalkboard. Examples are:

NESTS	TREES	CAVES	SALT WATER
BARNS	MUD	FRESH WATER	HILLS
WEBS	LOGS	ROCK PILES	HIVES

Help children name as many locations as possible. Then place children in groups of four or five and give each group fifteen to twenty animal name cards. Ask the children to sort those cards as to the kind of homes they live in.

Final results of classification (which may take two or three days of sorting, arguing and researching) should be placed on masking tape lists under the correct headings.

TAKE A WALK

Provide your students with paper and pencil. Take small groups of students on 15-20 minute walks to gather information about houses. Take a different walk each day. Some things you might want to examine are: chimneys, windows, roofs, doors, kinds of houses, colors and shapes.

Sketch the shapes of houses, roofs, doors, etc.

ROOFS

Observe the various shapes of roofs.

Note the variety of colors and materials used for roofs.

Try to find a piece of shingle for children to feel.

DOORS

Examine doors for decorations.

Can children determine what materials were used in the construction of a door?

Learn the names for the parts of a door:

- hinge
- door knob
- key hole

How many kinds of doors can be found?

- barn door
- garage door
- folding door
- revolving door
- overhead door
- sliding door
- etc., etc., etc.

Examine door knobs.

Find out if all doors have locks.

Examine keys for doors. Are they all the same?

How many doors can be found in the school? Where do they lead?

QUESTIONS TO CONSIDER

- *How are houses alike/different?*
- *How many kinds of materials are used in a house?*
- *Why have houses been built in their present locations?*
- *How many kinds of homes can be found (one-story, trailers, apartments, etc.)?*
- *How many homes are in a block, in a community, etc.?*
- *Which homes of children in the class are within walking distance?*
- *Why are roofs in this part of the country slanted and peaked?*
- *What kinds of building materials are used in homes?*
- *How can children tell if a house is old or new?*
- *Why do we have houses?*
- *What kinds of textures can be found on houses?*

WORDS FOR HOUSES (Just helping children know the meaning of these various terms is enough to keep one busy for a long time.)

trailer	hut
apartment	cottage
duplex	cabin
town-house	castle
condominium	teepee
split-level	lodge

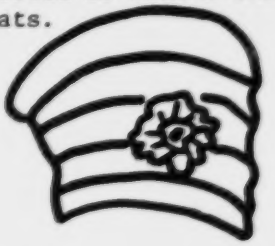
A HAT COLLECTION!

Make a collection of hats for your room. Parents might be willing to send old hats to school. Involve your students, other teachers and friends in helping you to gather together your collection. Look for hats in thrift shops and flea markets.

CLASSIFY THEM!

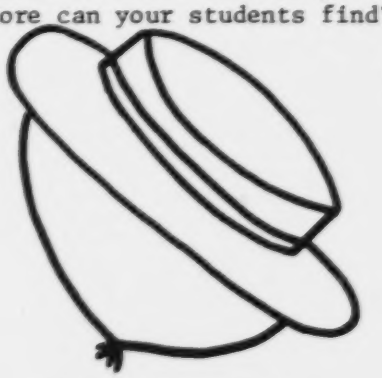
TALK ABOUT THEM!

Just think of all the wonderful plays and role playing that children could do with a collection of hats.

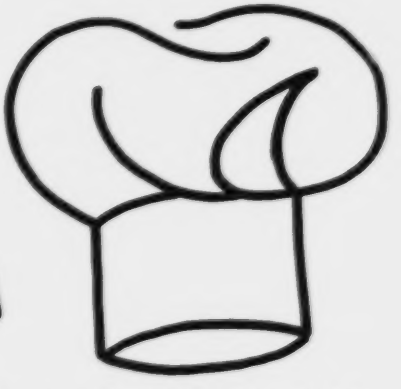


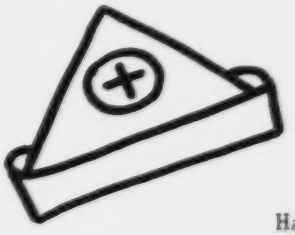
Use pictures of hats on this page for logic games. See page 129.
Catalogs and old workbooks could be used for more pictures of hats. How many more can your students find?

WEAR THEM!



FEEL THEM!





Play music for the Mexican Hat Dance!!

Have a HAT PARADE! Combine it with a study of careers.

From February 1980 Notes to Fort Yates Follow Through Staff.

USING YOUR HAT COLLECTION

Display your hats in an area where children can SEE and TOUCH them. Then sit back to enjoy the spontaneous activities and language which will take place if you, the teacher, allow it. As you're enjoying what takes place, use the opportunity to

LISTEN
and
OBSERVE.

You can gain many insights as to language, social relationships, etc. You might want to RECORD (write down or tape) some of the language you hear. Now you've got a starting point for developing a play, a poem or a center with your students.

Take a walk in a hat. Tell what you would be doing while wearing the hat.

Put on a hat. Tell who you think wore the hat, their age, size and what they looked like. What were they doing while wearing the hat?

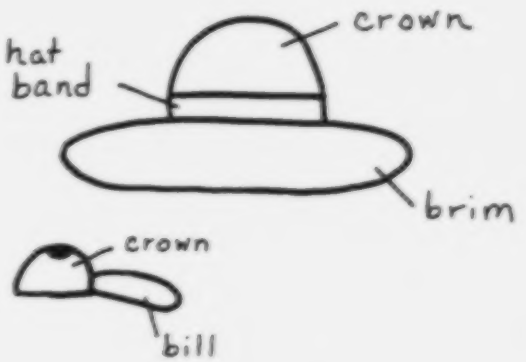
If you can find an advertisement for a hat, read it to your students. Have them draw what they think the hat looks like.

Take one hat from your collection and brainstorm for all the words which describe how the hat looks, feels and smells.

Keep a running vocabulary list of words about hats. Post this list somewhere on your wall for easy reference:

striped
weave
color words
crown
tassle
brim
angora
knit

Learn the names for the various parts of a hat:



A hat collection is a marvelous way for you, the teacher, to model language for children. Introduce them to new and wondrous words as you discuss and comment about the hats. If you've thought of words beforehand, you will be able to more easily pick up on children's cues and introduce them to new language. Don't take for granted children know the language. Often they do not or know it only in one context.

HAT SAYINGS

"Pass the hat."
"A bee in her bonnet."
"I take my hat off to you."

How many more sayings can you and your students find? Keep your ears open and you'll be surprised at how many there are.

Older students could research how these sayings came about.

RIDDLES

I am hard.
I usually have a number on me.
I go to fires.
What kind of hat am I?

You might write a riddle a day on the board. Children can become involved in reading the minute they walk into the room. Students could also write their own riddle.

SOME QUESTIONS TO CONSIDER

What can you tell about a person from his hat?

What kind of hat would you like to have?

Why do some people not wear hats?

Does anyone in your school wear a hat?

Does anyone in the room have a favorite hat?

Where are hats made?

Why do some people wear hats inside of buildings?

DISPLAY YOUR COLLECTION

After you've finished with your collection of hats, why not find a place to display it in the school? The library or display case in the hallway would be good places where it could be easily seen by others. Be sure to also display some of the writing and information gathered by your class. You might also like to display your students' favorite books about hats.

PRICES OF HATS

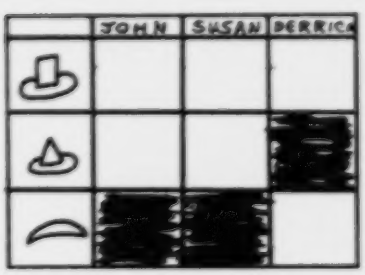
Get out those old catalogs! Use them to compare prices of hats. How many ways can children "show" a price with money?

This hat costs $1.49. Here are some ways I can show $1.49.

Allow children to manipulate real coins or play money. They will find this type of activity much easier. Which hat is the best buy for the money?

GRAPHS CAN BE FUN!

Hats In Our Room



Bring out your collection of hats --

Will they all fit in one of these classifications?

Are there any that do not fit?

Are all the hats of one category made of the same materials?

Do all hats have a circular shape in some part?

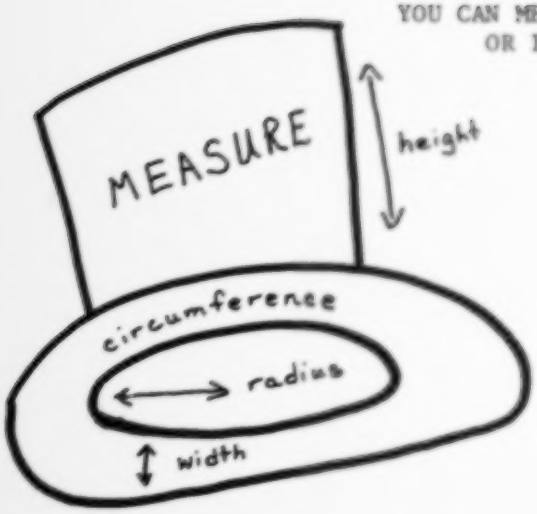
Do any have points or sharp corners?

What shapes can be found in a hat?

△ ○ □

How old are the hats?

YOU CAN MEASURE IN METRIC
OR IN INCHES



A good time to work on OPPOSITES!

tallest/shortest
biggest/smallest
fattest/skinniest
widest/narrowest

Did you notice the great spelling patterns in the words above? Use Marlene McCracken's Spelling Booklet for more words having many of these patterns. Are you having spelling dictation every day?

Non-standard Measurement
Use ribbon, string, yarn or paper strips to measure. Use dried beans or macaroni to measure volume.

Direct Comparison Measurement
Find hats which are larger/smaller than a hat chosen by you or the child.

Standard Measurement
Use these tools: rulers, tape measures, calipers, depth gauges.

My hat is _____ inches.

The _____ hat is _____ than my hat.

A _____ is longer than my hat.

Which hat weighs the most/least?

Why?

Collect all of the hats in your classroom or use a hat collection. Provide a scale (young children can use a balance scale). Can children find out:

--the total weight of all the hats?

--if the largest/biggest hat also weighs the most

--do the materials used for hats have any correlation to the weight of the hat?

--does the weight of the hat have any correlation to the type of work for which it is used?

--do all of the hats weighed together weigh the same as, more than or less than a child in the room?

Make a chart to record your findings:

_____ blocks
fireman's hat
_____ counters

GUESS FIRST!

Estimation is an important skill with which children need many experiences!

	ESTIMATION	WEIGHT
John's hat	1 lb.	
Mrs. Smith's hat	2 lb.	

A good time to work on ABBREVIATIONS:

lb. in.
ft. cm.

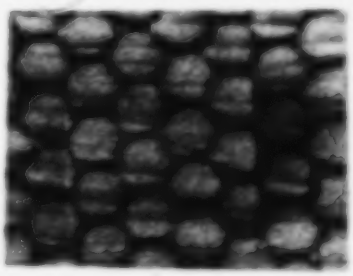
REPEATED PATTERNS

Many hats, gloves and mittens have repeated patterns woven in them. Use these common articles of clothing to help children become aware of how colors and design are sequenced to make a pattern. Then structure activities in your room for children to gain more experience in sequencing.

COMPARE HATS

Examine all of the hats or gloves in the room for patterns in color design or weave. Sort them in as many ways as possible. Is there more than one kind of pattern on a hat?

RUBBINGS



Lay a paper over a textured surface. Rub a pencil or the flat side of a crayon over the paper. Explore your room and building for textures and patterns. How many different ones can children find? Have them label their papers.

BEADING

Get out those beads and pieces of yarn or old shoelaces. This is a good activity to help children see sequencing. Older children might like to use seed beads and beading needles to make necklaces, etc.

WEAVING

Weaving of all types helps children to think about sequencing. If you haven't done weaving for a bit, now might be a good time for some more weaving activities.

GADGET PRINTING

When children do this activity, help them to remember to do repeated patterns as they print.

Make patterns with--

colored blocks
pattern blocks

WALKS

Take walks around your school to look for patterns. You can find them in windows, on doors, tiles and walls. Take small groups of children so that you can have interactions with all children.

Have children make drawings of some of the patterns they have made or have seen.

WHY DO PEOPLE WEAR HATS?

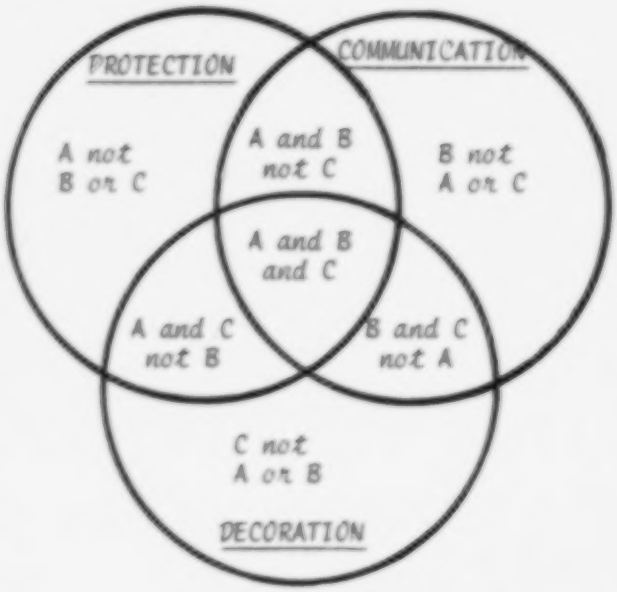
Protection	Communication	Decoration
construction hat	mortarboard - sign of graduation	
football helmet	clown hat - expresses fun & happiness	
military hat	fire hats -	
my winter cap		
fire hat		

Finish this chart with your students. Some people might have their hats in more than one category.* Encourage students to give their responses for placing a hat in a category.

*This could generate some lively discussion.

VENN DIAGRAMS

Another way you can help your students use relationships is to use attribute circles:



Use commercial attribute circles or tie a piece of yarn together to make a LARGE loop. Make three of these yarn circles in different colors. Make cards with the three headings and place one in each of the yarn circles. Make other cards with names or pictures of various hats. As children place the cards in the circles and you discuss where they should be placed, they will become aware that some can be placed in more than one category. The circles can then be overlapped to show common attributes.

The same thing can be done using other attributes of hats: color, texture, size, etc.

Some other logic games you might want to use in your classroom:

Othello
Chess
Checkers
Mancala
Attribute Blocks

Look at the tags which are sewn inside most hats. My tag inside my hat has the following information:

--Brand name

--Material it is made of (a good way to confirm one's guesses). What other things in the room are made of the same material?

--Where it was made. Locate on a map or globe the places where the hats are made. Graph how many hats were made in the United States or in foreign countries.

--The percentage of various materials

--The year it was made in

--Washing instructions

* * * * * * * * * * *

WORDS FOR HATS

BONNET

CAP

BEANIE

HELMET

SOMBRERO

BERET

TURBAN

CROWN

DERBY

HARD HAT

How many other words can you and your students add to this list? Put a sheet of paper with your list on a wall or bulletin board and add to it as words are found.

Can students find pictures of hats or an actual hat to illustrate each one of the words on the list?

C A R E E R S

Hats are a natural lead-in to a study of various kinds of work. . .

What does one do while wearing a particular hat?

Why do they wear the hat?

What other special articles of clothing does that person wear?

Do they need special training?

Do they need special tools?

Where do they get their hats?

W H E N I G R O W U P

By William Wise

This poem begins. . .

When I grow up,
I think I'll be a detective. . .

It's a great one to go along with a study of hats and careers. BRAINSTORM for other jobs one might have as an adult. Try to get lots and lots of ideas from children (not just the usual ones, i.e., fireman). Then with your help children might be able to write their own verse. Compile the verses together in a class book. Each child could also illustrate his verse using collage materials or paint.

M Y C L O S E T F U L L O F H A T S

By Harvey Weiss

The small boy in this book has a closet full of hats--hats for wrestling alligators, for fighting foxes or for going on an expedition. This boy can take off on an adventure any time he wants.

Simple directions are given at the end of the book for making several kinds of hats.

* * * * * * * * * * *

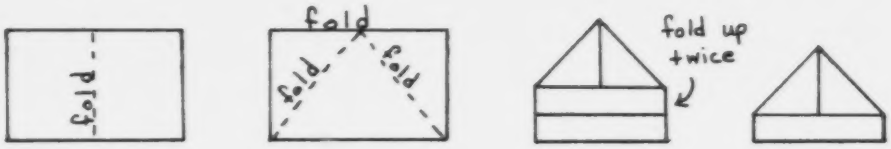
Have children choose their favorite hats and "dress up" to go along with it. Have a parade.

DESIGN A HAT

Use the three basic shapes of hats. You can create dozens of different hats. Just add paint, scraps of cloth, paper, yarn, flowers, etc.

Make your hats from: newspapers, paper sacks, construction paper, cardboard, cloth, vinyl, wallpaper, etc.

TRIANGLE HATS



BOWL HATS

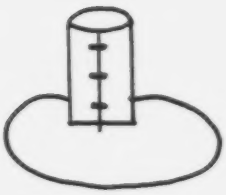
Roll a sheet of paper into a tube and fasten. Gather together at the top.

TUBE HATS

Cut a circle base. Cut out a center to fit head.

Roll a sheet of paper into a tube and fasten.

Cut tabs at the bottom. Fold them to inside and glue tabs to base.



JENNIE'S HAT

Ezra Jack Keats

Jennie dreams of having a beautiful hat but when it comes it is just a plain, ordinary hat. How Jennie's disappointment is turned into a wondrous surprise will delight young readers.

All children will delight in E.J.K.'s collage pictures. Compare the illustrations in this book with those of other E.J.K. books.

Have children look for the kinds of materials and techniques this artist uses. Perhaps they will gain new ideas for illustrating their own pictures and stories.

Collect materials which can be used for collage pictures and put them in your art center.

GRANDMOTHER LUCY AND HER HATS

JOYCE WOOD

A VISIT TO GRANDMOTHER LUCY'S HOUSE ALSO PRODUCED A VISIT TO THE ATTIC WHERE GRANDMOTHER HAD ALL OF HER HATS STORED. HATS ARE TRIED ON AND COMMENTED UPON. CAN CHILDREN FIND ANY HATS FROM THIS STORY IN YOUR CLASSROOM'S HAT COLLECTION?

Have you ever had children do their own illustrations for this story? Use collage materials, paint, chalk, etc., to make large mural-type pictures.

If you haven't read this story to your class lately, this would be a good time to reread it.

Involve everyone in the story! As one reads the story, all children become the peddler or the monkeys. No waiting around for someone else to say their lines.

"50¢ a Cap" is a natural lead-in for a study of money. Bring in some money (working with small groups) and find all the ways one could show 50¢.

Have a cap auction or sale! Who has attended an auction? What other things are auctioned at sales?

SENTENCE TRANSFORMATIONS

Use some of the sentences in this story to help children become aware of how language works. Brainstorm for words which could be substituted.

On every branch there was a monkey.

floor--cat
hat--feather
boy--hat

Go on a walk to find other things that have stripes or polka-dots.

BRAINSTORM FOR:

--Other things a peddler could sell
--Ways peddlers traveled
--Things peddlers sell today (hint: Avon lady)
--Other things that cost 50¢
--Other stories that have peddlers in them

You can find this story in the library or in Sounds of a Powwow by Bill Martin, Jr.

THE 500 HATS OF BARTHOLOMEW CUBBINS

Dr. Seuss

Children have a lot of fun with this story. They love the counting and, of course, the hats, which get bigger and better. If you've read this story without showing the pictures, have children use different art techniques to show Bartholomew's hats.

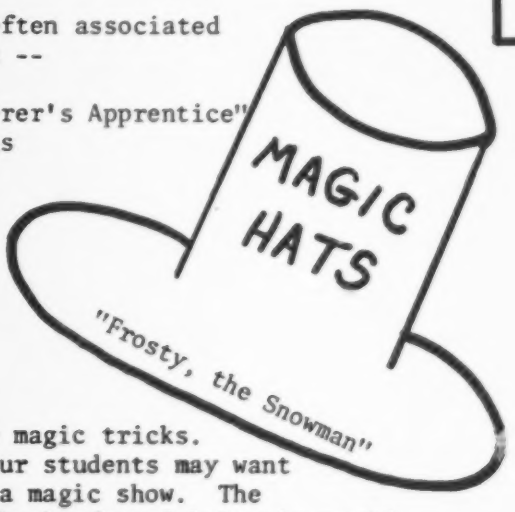
HOW MUCH IS 500?

Find 500 of something: beans
rice
sticks
stones
books

A good time to work on grouping things by tens. Check the Informal Education Series booklet on Mathematics for ideas and thoughts on place value.

Hats are often associated with magic --

"The Sorcerer's Apprentice"
Leprechauns
Magicians



Learn some magic tricks. Some of your students may want to put on a magic show. The following books from Scholastic would be good resources:

Magic Made Easy by Larry Kettelkamp
Spooky Magic by Larry Kettelkamp

THE WISHING HAT

Annegert Fuchshuber

A German tale -- poor Korbinian finds a wishing hat and wishes for simple and unusual things, which are criticized by his relatives and friends.

What other stories involve having an object which grants wishes? What do these stories have in common?

Check with your librarians for other books about magic and magical things.

THE HAT

Tomi Ungerer

A black, silk tophat is blown by the wind and lands on the head of a penniless soldier. He finds, to his surprise, that the hat will do what he commands it to do!

Have your children brainstorm and research for other things in stories that have magical powers.

A fun poem to use with "500 HATS" is "Jonathan Bing" by Beatrice Curtis Brown.

Be sure to have students search the illustrations in this book for the many kinds of hats people are wearing (chauffer, cooks, etc.). A great time to introduce language.

Use this story as a lead-in to an investigation of other hat sayings.

MADELINE AND THE BAD HAT

LUDWIG BEMELMANS

In this story Madeline meets a little boy who is a "Bad Hat."

We all wear different hats under different circumstances--a good topic for discussion.

IF HATS DON'T EXCITE YOU, TRY STUDYING:

MITTENS

SHOES

BOOTS

MACHINES HELP PEOPLE DO WORK

Lever

Inclined plane

Wedge

Wheel and axle

Pulley

Screw

Simple machines —
give you more force
give you more distance or speed

Dear Teachers,

In the world of today we are surrounded by machines of all types, which make our work easier and our life more enjoyable. Almost all of them make use of one or more of what we call the six "simple machines." The purpose of this month's notes is to have children explore and experiment these machines and hopefully to find relationships between work, basic science principles and actual objects found in our daily lives--to look at common, every day objects with new wonder and insights.

Check out your science books. You'll probably find more activities in them that will go with this month's notes.

From January 1981 Notes to Fort Yates Follow Through Staff.

A LEVER IS A STIFF BAR THAT TURNS ON A POINT (THE FULCRUM). THE BAR MOVES BUT THE FULCRUM DOES NOT.

SOMETHING TO THINK ABOUT

Is it easier to lift something if your force is farther from the fulcrum or closer to it?

Is it easier to pull out a nail with a long-handled hammer or with a short-handled hammer?

Does the distance from the fulcrum make any difference in the amount of force you must use to do the work?

Is it easier to cut a piece of cardboard (or crack a nut) close to the fulcrum or far from it?

How can a child lift an adult or box which is heavier than they are?

Can the lightest weight child lift the heaviest child in the class?

Try lifting a pile of heavy books from the floor. Then try lifting the same pile of books with a lever. Balance a board on a block of wood or barrel shape. Place the books on one end of the board. Push down on the other end and watch the books being lifted. Try lifting other heavy objects.

Give children opportunities to open bottles and cans with a bottle opener (cocoa cans are good examples to use). This will give them some practical experience in using a lever.

THREE KINDS OF LEVERS

1. The fulcrum is between the force and what you want to move. You push down on one side to make the other side go up.

claw hammer
crow bar
seesaw (teeter-totter)
oars in a rowboat
balance scale
pliers
scissors

2. What you want to move is between the force and the fulcrum. You pull up at one end and the part of the lever that lifts also goes up.

wheel barrow
bottle opener
nutcracker

3. The fulcrum is at one end, what you move is at the other and the force is between them. You are trying to move something farther or with more speed.

arm while playing tennis or baseball
fishing pole

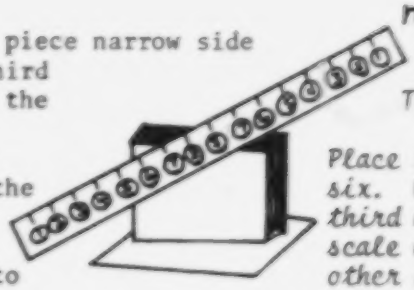
A BALANCE SCALE FOR YOUR MATH AREA

Make up one of these balance scales to show how a lever can work and then place it in your math center.

Saw a yardstick off at 24".

Take the left over part and saw off three 1" pieces. Glue two of these pieces together, as thought they were part of a sandwich.

When the glue is dry, glue the piece narrow side down on the flat side of the third piece. This forms a stand for the scale.



Glue a piece of rubberband to the top of the stand.

Small paper circles are glued to the inch marks of the 24" piece. Numbers from one to twelve are written on the papers and placed on either side of the midpoint.

The 24" piece of wood is then balanced on the small stand.

Children using bolts or other weights can use their balance scale for many projects.

Great fun to use to practice math facts!

TRY THESE PROBLEMS

Place two weights on a six. Where do you place a third weight so that the scale will balance? (Use other numbers. This is a semi-abstract way to show multiplication facts of two.)

If weights are placed on two and three on one side, where must the weight be placed on the other side to make it balance? Can the students discover that they are really doing their basic addition facts?

If you are lucky enough to have a teeter-totter on your playground, make use of it to help your children find out about levers and how they work. Choose a nice, sunny day for this activity and allow enough time for children to experiment. Have children pair up and take turns sitting on the teeter-totter. Encourage them to try sitting in various places on the board. Can they draw any conclusions as to the best places to sit to lift the other person? To help them verbalize and draw their conclusions, you will want to keep some charts and records, similar to the example below.

TEAM	WEIGHT	SITTING ON THE	HARD or EASY
Tom	24 lbs.	J T	
Joseph	32 lbs. (or use metric kilos)	J T J T	hard
Candy			
Beth			

AN INCLINED PLANE IS A SLOPE OR RAMP. IT HELPS YOU MOVE OR RAISE HEAVY ITEMS. A STEEPER SLOPE REQUIRES MORE WORK (FORCE).

BLOCKS

(Use them to develop concepts)

If you're fortunate enough to have large building blocks in your school, use them to have children build stairs of varying slopes to find out which type of slope is the easiest to climb.

SOMETHING TO THINK ABOUT

HOW CAN A RAMP HELP IN A SCHOOL?

IS IT EASIER TO GO UP STAIRS OR STRAIGHT UP A LADDER?

IS IT EASIER TO GO UP A LONG FLIGHT OF SHALLOW STEPS OR UP A SHORT FLIGHT OF STEEP STEPS?

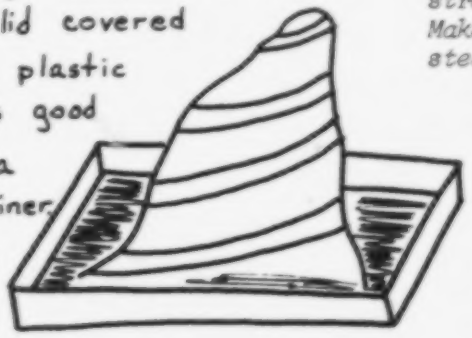
WHY DO SOME HOUSES AND BUILDINGS HAVE RAMPS?

TRY THIS EXPERIMENT. . .

You will need: a pile of books; a strong, thick rubberband; a skate; and a board.

Attach the rubberband to the end of the skate. Hold up the skate by the rubberband. Observe how far the rubberband stretches. Measure it and record your results. Now pile up the books and place the board so that it forms a ramp. Pull the skate up the board by means of the rubberband. Observe this time how much the band is stretched. Measure and record the information. Place the board at different angles and repeat the experiment. What conclusions can children draw from this experiment?

A large dishpan or box lid covered with plastic works good for a container ↳



Help children understand why roads do not go straight up a mountain with this project. Make a mountain of damp sand so that it has steep sides. Attach a spring scale (check science kits for one of these) to a car and pull it up the mountain. Record how much force was used. Now build a curved ramp road. Record how much force was used to pull the car. Compare this with the amount used to pull the car straight up the mountain. Children might experiment with this using roads of various steepness.

If you are close to hills, look at the paths made on the hillsides by animals. They zig-zag up the hill rather than going straight up.

WHEELS ARE USED TO REDUCE FRICTION.
A WHEEL AND AXLE IS A SIMPLE MACHINE MADE UP OF A SMALL WHEEL ATTACHED TO THE CENTER OF A LARGER WHEEL. THE SMALL WHEEL IS USUALLY A ROD THAT TURNS AS THE LARGER WHEEL TURNS.

water wheel

propeller

door knob

clocks

eggbeater

rolling pin

windmill

pinwheel

How many other items that make use of the wheel and axle or gears can your students find?

Wonderful Wheels by Feenie Ziner gives a simple history of the wheel.

SOMETHING TO THINK ABOUT

What if there were no wheels in the world? What would we have to do without? Have your students take a look around their classroom, school and home. Make a list of everything that uses wheels or gears. Try going one day without using anything that has a wheel. This could become a real problem solving situation for your students. If something cannot be used, what could be used or done in its place?

Find an old steering wheel. Add it to your drama center.

CONSTRUCTING aids in building CONCEPTS

Many classrooms have many items which children can use to build working models of machines. Look through your cupboards and see if you have any of the following: Lego Blocks, interlocking cubes, blocks, Rig-a-Jig, connector sets, tinker toys, girder sets, wood, nuts and bolts, etc. All of the above can be used by children to explore and find out about simple machines. If your classroom doesn't have any manipulative construction things, perhaps you could borrow them from another classroom for a short time. Don't save this type of activity as a reward for "work" being finished. Include this as a type of work, which gives children practical experience, as part of your daily planning.

Have you sung "The Wheels on the Bus" lately? It's a favorite of children.

PUT A COPY OF JAMES S. TIPPETT'S POEM ''WITH MY BUILDING SET'' IN YOUR CONSTRUCTION CENTER. CHILDREN MIGHT ADD TO THE POEM BY LISTING THINGS THEY CAN BUILD WITH THEIR BUILDING SETS. USE THE FRAME ''I CAN MAKE _____.''

SOME WHEELS CAN TURN OTHER WHEELS.

One of the best ways for children to observe gears in action is to look at the works of a clock. If possible obtain a clock or watch which can be taken apart and examined by the children. An egg beater also works by means of gears. Provide an egg beater for your drama center and watch children experiment with it. You could also have children beat up egg whites to make a meringue. Lots of opportunity here to see how much work is needed to beat the eggs. Compare it with an electric mixer. Does it take the same amount of time?

Make a collection of clocks for your classroom. Many young children may not be aware of all of the many types of clocks that can be found in our world.

Make a copy of the poem "Clock" by Valerie Worth on a chart. Display it along with one or two old clocks that are no longer working. The poem begins "This clock has stopped," and is a perfect lead-in to encourage children to take the old clocks apart and to carefully examine them. Who knows??? They may even fix them. (My brother once got an old clock to run backwards. We had a marvelous time watching the hours go in reverse.)

"How Watches Work" in the book How It Works, Vol. 2 by Martin L. Keen will appeal to older students, as they take apart old watches and clocks.

CLOCKS AND MORE CLOCKS
Pat Hutchins

Second and third graders will appreciate the humor of this book. Mr. Higgins wants to know if his clock is correct so he buys another one and places it in a different part of the house. Of course, by the time he travels from one part of the house to another, time has passed and the clocks never seem to agree. So, he buys another clock.

BRAINSTORM WITH CHILDREN FOR ALL THE WORDS THAT DESCRIBE WHEELS.

round
gears
ridged
spoked

Are you recording children's comments as they interact with materials? Post the comments around the room. You'll find children spend a lot of time reading them.

Willy and His Wheel Wagon
Gail Gibbons

Willy loves wheels. He builds a wheel wagon to keep his collection of wheels together and takes it with him wherever he goes. This is an excellent book to use when you're looking for different kinds of wheels.

Northern J. Calloway Presents Super-Vroomer!

Tommy has read about a race in the newspaper. The rule was that you had to make your own car. Out of crates, boards, rope, cans and wheels Tommy and his friends built a car which they are sure will make them the champion racers of the world.

Make a number book about wheels. Find pictures to illustrate things with one, two, three, four or more wheels. Use one page for each number.
Talk about the advantages of single wheels and pairs of wheels. Do wagons, cars, buses and trucks have single wheels on each corner or are they pairs of wheels?
Compare wheels on cars, trucks, street cleaners, bicycles, motorbikes, road equipment, etc. Are they all the same?
Provide children with magazines. Have them cut out pictures of things that have wheels and glue them to a large sheet of paper. How many different things can they find?
Build a small wagon from scrap lumber. Try pulling it with triangular, square and circular wheels.
Compare a one-speed bike with a ten-speed bike, noticing especially the wheels and gears.

LET'S FIND OUT ABOUT WHEELS

by Martha and Charles Shapp

WORKING WHEELS

Helen Webber

FUN ON WHEELS

This is not only a counting and rhyming book, but it is also a humorous book. Even kindergarten children will enjoy the simple text and lively illustrations. Have children use the structure of the text for writing their own wheel books. Of course, you'll want to make the book in the shape of a wheel! The last line of this book, "Everyone Feels Great On Wheels," would be a great title for a class mural. Have the kids draw themselves (or others) on some type of wheels.

A SCREW IS A CURVED RAMP. SCREWS CAN LIFT OBJECTS.

Here's an easy way to help children understand that a screw is only an inclined plane wrapped around a cylinder. Cut a square of paper in half forming two right triangles. On one of the triangles draw a line with a crayon or marker on the edge of the longest side. (fig. 1) Lay the triangle on a table or desk with the colored side face down. Place a pencil on the edge of the triangle and roll the triangle onto the pencil. (fig. 2) The colored line will highlight the spiral effect of the inclined plane making a screw.

fig. 1

fig. 2

Use these to demonstrate how a screw helps us:

- *nuts and bolts*
- *cookie press with screw knob*
- *C-clamp*
- *jar with a lid*
- *pipes*
- *old style piano stool*
- *swivel chair*
- *lipstick tube*
- *hand drill*
- *jack*
- *monkey wrench*

A WEDGE IS MADE UP OF TWO INCLINED PLANES. IT IS MOVED BY FORCE THROUGH DISTANCE. WEDGES ARE MOST OFTEN USED TO PUSH THINGS APART.

ALL THESE ARE WEDGES:

- *nails*
- *chisel*
- *knife*
- *saw*
- *axe*
- *a woodpecker's bill*
- *a needle*
- *arrowhead*
- *fish hook*
- *pin*

Children's answers and comments will make interesting listening.

Bring various kinds of saws and wood to school. Have children experiment with using the various kinds of saws to cut the wood. Compare the hardness or easiness of the work.

- Do thick boards take longer to cut than thin ones?

Use a timer to see how long it takes to cut different sizes of boards.

- Can children explain why some might take longer to cut?

Have children drive different lengths of nails into the same piece of board.

- Which nail can be driven all the way with the least amount of effort?
- Which hammer is easier to use? Why?

Compare driving in a roofing nail with driving an eight-penny nail.

A PULLEY IS A SMALL WHEEL WITH A GROOVED RIM THAT HOLDS A CORD OR ROPE.

All these use pulleys:

flagpole
sailboats
cranes
derricks
steam shovels
elevators

A perfect time to make use of tinker toys and other building sets.

A HOMEMADE PULLEY

Scrounge in your science kits for pulleys.

ASK IF YOUR CLASS CAN RAISE AND LOWER THE FLAG ON THE OUTSIDE FLAGPOLE TO OBSERVE A PULLEY IN ACTION.

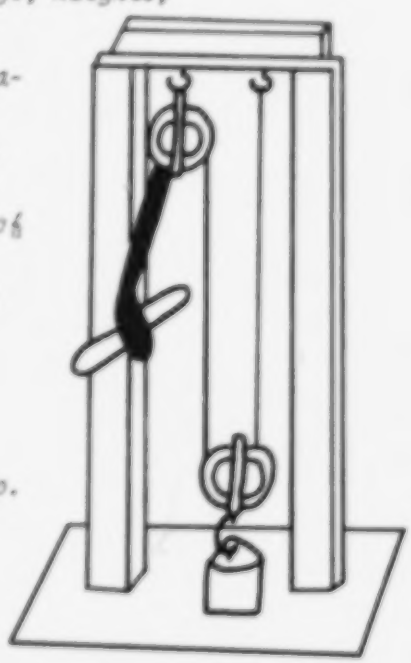
Old wheels that have the tires removed make great pulleys.

Add a large packing box to your drama center to be used as an elevator.

INVITE A PARENT IN TO HELP YOUR STUDENTS BUILD THIS

You will need: wood 2 x 4's, 2 cup hooks, 2 pulleys, weights, small piece of doweling, cord

1. *Build your frame with the 2 x 4's (see diagram).*
2. *Screw in the cup hooks about 12" apart in the bottom of the top board.*
3. *Hang a pulley from one hook; tie one end of the cord to other hook.*
4. *Thread the cord through the second pulley and then up through the first pulley.*
5. *Tie the dowel to the end of the cord to use as a handle.*
6. *Place a weight on the second pulley.*
7. *Using the dowel handle, pull the weight up.*



Compare lifting the weight by hand and by using the pulley. Is there a difference in the amount of force needed to lift it?

Simple machines can be part of more complicated machines.

Perhaps some of your students have toys which can be used to demonstrate how simple machines are often parts of more complicated machinery. Some of the students might be willing to bring their toys to school to use for demonstration purposes.

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Any road machinery near your school? If so, find out if your class can visit them to look more closely at the machines. Perhaps a worker would be willing to give brief explanations of how they work.

‡ ¤ ‡

MAKE A GIANT COLLAGE OF PICTURES SHOWING MACHINES WHICH HAVE SIMPLE MACHINE PARTS:

CLOCKS	CARTS
EGG BEATERS	PEPPER MILLS
WHEELBARROWS	HINGES ON DOORS
TOYS	CAN OPENER
TOOLS	OARS ON A BOAT

AS CHILDREN FIND PICTURES IN MAGAZINES, THEY CAN GLUE THEM TO THE COLLAGE. YOU MIGHT TITLE YOUR PICTURE, "MACHINES COME IN ALL SHAPES AND SIZES."

* + * + * + * + * + * + * + * + * + * + * + * + * + * + * + * + * + * + *

A walk is always interesting...

Take a walk around your school to look for simple machines. You'll find them often as parts of other machines or tools. Look for chairs with swivel wheels and seats, the roller and wheels in a manual typewriter, the roller on a ditto machine, ramps and carts for moving and carrying things. The school kitchen will provide a wealth of materials. As you walk through the school, you or someone in the class should make a record of your findings, so don't forget paper and pencil.

MORE ideas to CHALLENGE and DELIGHT...

A COOKING IDEA

Using cooking utensils is one way to provide children with experiences in observing how simple machines help us. A cookie press, grinder, rolling pin and egg beater are all tools which most children have seen, but not actually used. Make a batch of cookies (or some other recipe) which call for the use of these utensils. As you supervise the children using the tools to make their snack, model vocabulary (names of objects, and action words) for them.

JANITORS ARE TEACHERS, TOO

Invite one of the school janitors to come into the classroom and show children the tools which they use. Children could prepare for this by preparing some questions they want to ask the janitor.

ANOTHER VERSION OF THE INCLINED PLANE EXPERIMENT. . .

For this experiment you will need: boards of different lengths, a toy wagon, a spring scale, a cord, some books

To do the experiment: Stack the books. Place the board on the books to make an inclined plane. Place weights in the wagon. Weigh the wagon with the spring scale. Attach the scale to the wagon and haul the wagon up the incline. (fig. 1)

fig. 1

Place the other boards on the pile of books to make other inclines, and repeat the experiment. Which ones take less force? (fig. 2)

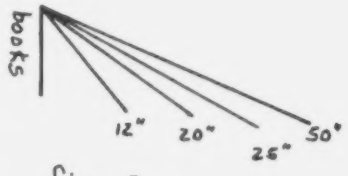


fig. 2

(For your information: the longer the inclined plane, the more gentle the slant. Consequently, much less force is required to go up the slant.)

Add a toy sand or water wheel to the water table. It will provide many hours of exploration and challenge for your students.

* * * * *

The How And Why Wonder Book Of Machines by Jerome J. Notkin is a book you'll definitely want to use with this unit. It gives excellent examples and will be a good source book for you, the teacher. It also has a number of simple, but excellent experiments to do with your students. Some of these are: building a lift truck, how to make an elevator, directions for making a water wheel and experiments with pulleys.

EXPLORING THE WORLD OF WORK . . .

All workers make use of some type of tool or machine in their work. Explore with your students the kinds of machines workers use.

BRAINSTORM RESEARCH RECORD

After brainstorming for occupations, find out what machines the people use, and record your information on charts or in class books.

One teacher I know made up occupation boxes. Tools and costumes (hats, etc.) for an occupation were placed in a box. Children could take the occupation boxes to the drama center to be used in plays or they could be used to encourage children to extend their drama activities into other areas.

WORKER	MACHINES
farmer	tractors shovel
miller	windmill
tailor	needle pins scissors
cobbler (shoemaker)	hammer nails tacks
logger	axe wedge
carpenter	hammer saw nails chisel
potter	potter's wheel
builder	wheelbarrow

While exploring the world of work, don't forget to read the story of The Emperor's New Clothes by Hans Christian Andersen. The tailors in this case trick the emperor into believing they are making him a wonderful new suit of clothes.

Grimm's The Elves and The Shoemaker is another story you'll want to read to your students. By the way, a shoe repair shop is a fascinating place to visit. The many wheels, pulleys, etc. are fascinating to watch.

This is an excellent opportunity to help your students become aware of the -er ending, meaning one that performs the action indicated by the root verb.

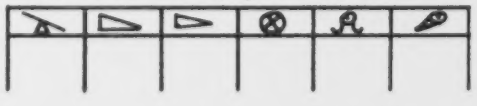
A builder is one who builds.
A potter is one who makes pots.
A farmer is one who farms.

Use the -er ending for spelling dictation this month. How many occupations follow this rule? Are there any which do not? (ballerina, dentist, etc.) Make charts with occupations that end in -er and those that do not.

* * * * *

A CLASSIFICATION GAME . . .

Once children have had some experience with simple machines and they have done some of the above work, put out the following classification activity for them to use in their independent time. Make a chart or use small boxes with the following headings: lever, inclined plane, wedge, wheel & axle, pulley, screw. Make a collection of small cards. Children sort the cards by placing them under the correct heading. There may be some lively discussion as children try to decide which heading the item should go under.



USE SEWING TO...

- Teach concepts
- Develop motor coordination
- Provide another medium with which children can express themselves

Pins and needles act as a wedge in pushing the fibers of the cloth apart. As you provide opportunities for children to experiment with needles and pins, call children's attention to how the needle or pin acts as a wedge.

Provide children with pieces of burlap (fibers spread by the needle can be easily seen), yarn or embroidery floss and large needles. Give each child a small square of cloth to design with stitchery. After all the squares have been finished, have the children join them together to make a hanging or divider for your classroom.

Help children understand that needles come in all shapes and sizes. Bring in a collection of needles for children to look at and possibly use for various projects. A curved needle, an upholstery needle, embroidery needles, darning needles and beading needles are only a few that you may be able to find. Help children observe the sizes, thicknesses, points and the materials from which needles are made. You might also bring in knitting needles and observe how they are similar and dissimilar to other needles.

Teach your children some simple stitches:

- Lazy Daisy
- Running stitch
- Cross stitch

ANOTHER SEWING PROJECT...

Combine the study of occupations and the story of The Elves and The Shoemaker by Grimm. Children become the elves finishing the shoes for the shoemaker by designing a shoe to be worn by a worker and sewing it of felt, cloth, vinyl wallpaper or a combination of these. Then give this frame to children to complete.

This is a _____ shoe.
It goes to _____.
It can _____.

Children then attach their writing to their shoe. Display the shoes and writings by a display featuring the book and some equipment that shoemakers would use in their work.

THE HOUSE BITER
by William D. Sheldon

This "Little Owl" book has a wonderful pattern which children can use to write their own books. In fact, it has several patterns from which you can pick. One of them goes like this. . .

I am a house biter,
I am a big, strong house biter
I bite little houses
I bite big houses
I bite and bite and bite.

Have your children choose their favorite kind of machine and, using this pattern, write their own story.

A POEM TO USE ALONG WITH THE HOUSE BITER IS "THE STEAM SHOVEL" BY ROWENA BENNETT. OLDER CHILDREN MIGHT LIKE TO COMPARE OTHER MACHINES TO ANIMALS, BIRDS OR PREHISTORIC MONSTERS.

"House Moving" by Patricia Hubbel is a poetry structure that is very easy for children to follow. It involves essentially making a list of the elements which make up something or describe something.

The "Little Owl Book" Going Up, Going Down by H. R. Wittram is a book about going on an elevator.

A "Sound" Poem to use . . .

"The Jumpety Bumpety Bus" by Claryce Allen is a poem which tries to describe the sound a machine makes rather than the visual description of it. Children will especially enjoy deciding how to make the sound and then, of course, doing it. Along with this poem you might try to make or obtain a recording of trains and other machines. As children listen for all the variations in sound that a machine makes, they will be gaining valuable experience in distinguishing likenesses and differences in sound.

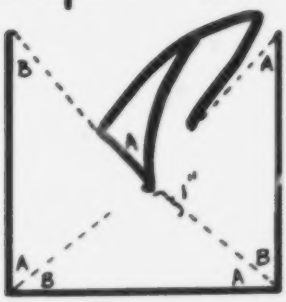
A PADDLE WHEEL BOAT

Provide materials for children to make their own paddle wheel boat. Each child who makes one will need a block of wood approximately 7" x 4", a thin scrap of wood, two long nails and a fat rubberband (as long as the distance between the nails). Pound two long nails far apart into one end of the wood. Stretch the rubberband over the nails. Place a thin scrap of wood between the rubberband and the nails to be used for paddle. Wind up the paddle by twisting it in the rubberband. Place the boat into the water and watch it go.

Not all children will want to do this project. However, encourage several children to do it so that results can be compared. Does the size of the boat make any difference? Does everyone's boat move in the same way? Does the type of wood make any difference? How far can the boat move? How fast can it go? Some children might race their boats.

/-/-/-

A simple windmill to make . . .



You will need:

heavy paper
a pencil with an eraser
a ruler
scissors
a straight pin

(A windmill is really only the spokes of a wheel without the rims.)

Recently there has been much talk about using the wind as a source of power here in the United States. However, people have been aware of methods for using wind power for centuries. One of the most popular ways is by the use of windmills. There have been many commercials and advertisements lately for windmills. Use the pinwheel to help your students understand how the windmill works.

Cut a paper square. Cut a slit from each corner to within about an inch of the center. Bring all the "A" corners (see diagram) to the center, one at a time so that they overlap. Keep the points together as you poke a pin through them and the center of the windmill. Push the pin into the eraser end of the pencil. Try your windmill by blowing or taking it out in the wind.

If possible, try to observe a working windmill with your students.

A walk to take . . .

Just after a snowfall is a perfect time to take a walk with your students. Look for all the different tire tracks that can be found. (I saw one this morning that looked like a giant waffle.) Can your students make some guesses as to the kind of machine that made the tracks? Older children might be able to sketch the tracks. Take a ruler along and they'll be able to measure the width, depth and length of the tracks. Follow a set of tracks and see if you can find the vehicle that made the tracks.

Are your children writing or dictating every day? Have children write their own stories for seatwork activities rather than having them do ditto or workbook pages.

BOOKS TO EXTEND AND ENHANCE WHAT WE KNOW ABOUT MACHINES

The Giant Alexander and Hannibal the Elephant

Frank Hermann

A friendly giant helps out the fire department and an electrical company. In the process he meets up with kidnappers who kidnap his friend, Hannibal, the elephant. Throughout the book, Alexander and Hannibal use ramps, pulleys, wheels and levers in real and imaginary machines to do their work. How many different uses of machines can your students find in this book?

SKATES

EZRA JACK KEATS

DOGS AND SKATES TWIRL, SLIDE AND BUMP THEIR WAY ON A DOWNHILL COURSE IN THIS POPULAR BOOK.

THE CABOOSE WHO GOT LOOSE

Bill Peet

There is a great picture of a train engine receiving its annual overhaul in this book. It's a picture to spend time on finding the pulleys, drive shaft, wheels, etc. Also notice the curve of the tracks going up a mountain. How many other simple machines can children find in this book?

Amelia's Flying Machine

Barbara Shook Hazen

Amelia involves her sister and cousins in building a machine that will coast down a ramp. The slant and length of the ramp pose problems for Amelia in keeping the machine on the track. Many children will be in sympathy with Amelia in this very engaging story from the life of Amelia Earhart. Perhaps some of the older children might like to find out more about this early woman aviator.

TIM AND LUCY GO TO SEA

Edward Ardizzone

Children will enjoy how Tim and Lucy save the ship's crew from a mutinous band of cutthroats. At the same time they'll enjoy the pictures done in black line drawings. Use them to point out to children how winches are used to haul cargo, the uses of pulleys and ramps on a ship, and how pulleys are used to haul a boat off the ship.

If I Drove A Tractor

Miriam Young

A small boy dreams what he would do if he were driving various kinds of tractors including back-hoes, bulldozers, stone crushers and many others. While driving the tractors he uses levers, pulleys, gears and wheels to manipulate the machines. There is lots of good vocabulary in this book you will want to be aware of before you use it with children.

MORE BOOKS TO USE...

Mike Mulligan and His Steam Shovel
Virginia Lee Burton

Katy and the Big Snow
Virginia Lee Burton

Hucket-a-bucket Down the Street
Sarah Rush

Little Tim and the Brave Sea Captain
Edward Ardizzone

The Truck Book
Harry McNaught

Benny the Bulldozer
Edith Thacher Hurd

Captain Murphy's Tugboats
William Hall

Curious George Rides A Bike
A. H. Rey

If I Drove A Truck
Miriam Young

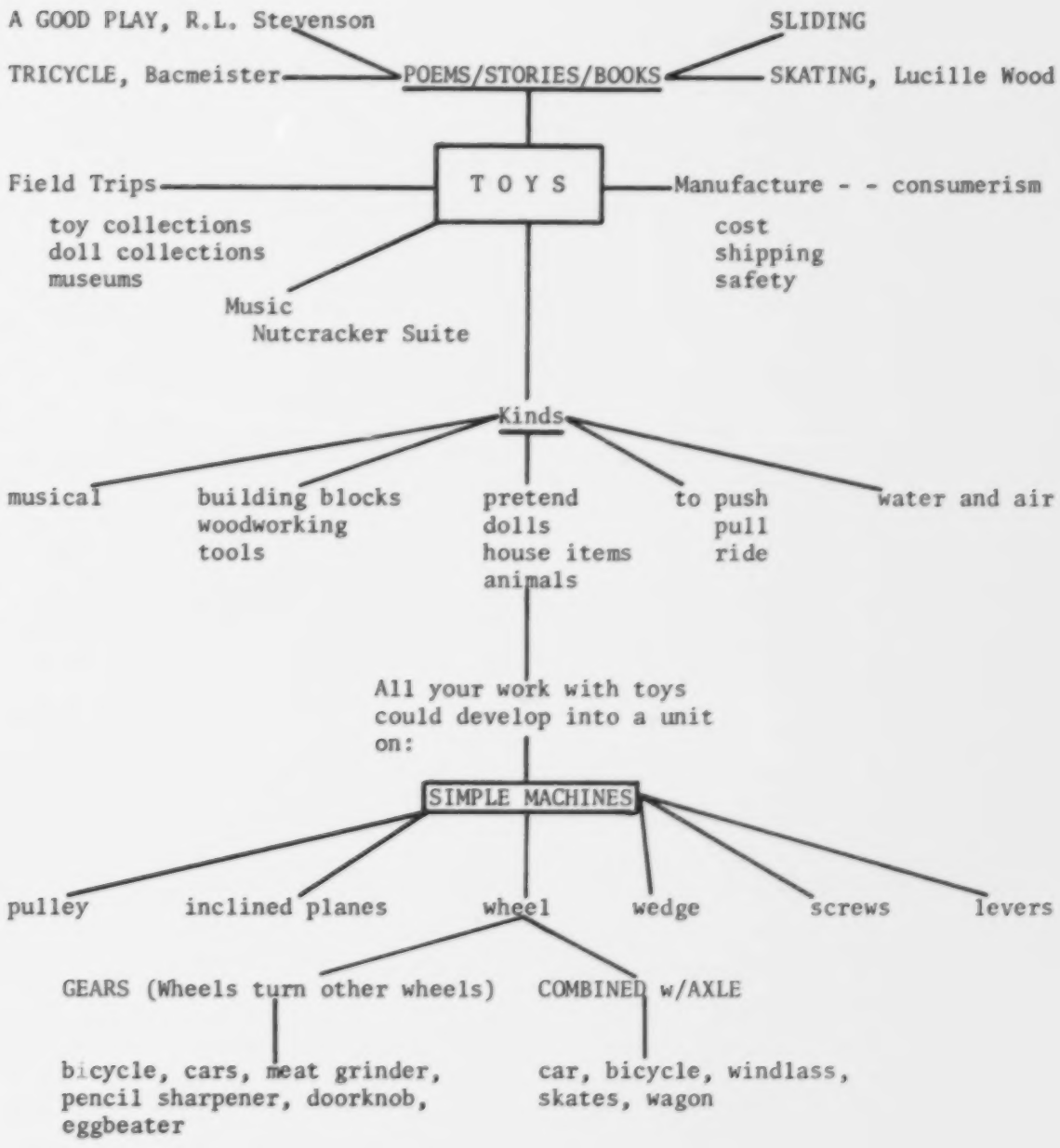
The Lever and the Pulley
Hal Hellman

Airplanes and Trucks and Trains, Fire Engines, Boats and Building and Wrecking Machines
George Zaffo

The Simple Facts of Simple Machines
Elizabeth James and Carol Barkin

Poetry for Young Scientists
compiled by Leland B. Jacobs and Sally Nohelty

Toys and What I Want for Christmas



From Notes to Fort Yates Follow Through Staff, December 1979, pp. 1-17, 21.

Toys to Push, Pull and Ride -

Use Tana Hoban's book, PUSH, PULL, EMPTY, FULL, Macmillan, 1972.

Remember: Classification activities work best with small groups.

CLASSIFY toys by:

1. *Materials they are made of.*
2. *How they move.*
3. *How it feels - hard? soft?*
4. *If it makes a noise*
5. *Size*
6. *Weight*
7. *Number of wheels.*
8. *Those you can ride/not ride.*
9.
10.

Gather together a collection of small toys to use in classification activities.

BRAINSTORM for toys

-one can push
-one can ride
-one can pull
-that have wheels
-etc.

How many can your class find? Write your list on a large paper. Add to it as new ones are found. Look through magazines to find pictures to illustrate your list.

Here's a frame for writing:

I can pull a _____, but I push a _____.

OR

I can ride on a _____, but I can't ride a _____.

SOME GREAT SEATWORK ACTIVITIES:

HAVE CHILDREN CUT OUT PICTURES OF WHEELED TOYS. PASTE ON CARDS. USE THE CARDS FOR CLASSIFICATION ACTIVITIES.

Use these toys to begin a study of opposites. How many opposite words can your class find? Make a book about opposites. Use Tana Hoban's book (above) as an example.

What stories in your basal readers are about cars or toys? Use them now and build in your skills.

ASSIGNMENT: Bring a toy car to school.

If you don't like cars, try an animal, block, boat, etc.

If each child brings in one toy car, you will have a marvelous collection to use for classifying, brainstorming, talking and writing activities. Use masking tape to mark the child's name on his/her car.

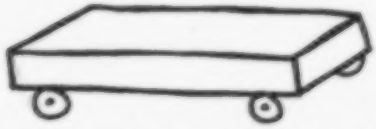
What are the wheels made of?

Compare the wheels of the cars.

How are all of the car alike? different?
Name the parts of the cars.
How realistic is the car?
Compare the cars for color, size, shape.
Which car weighs the most? least?
Who brought in the biggest car? smallest?
How many wheels do the cars have?
Which car is the longest?
What is the car made of?
Are there any words written on the toys?

USE the collection of cars to develop CONCEPTS of:

- measurement
- color
- classification
- size



(Put blocks on wheels and design your own car.)

BRING OUT

THE BLOCKS!

Design a road for cars.
Design a town for them.
Can children design a building to house the cars?

Make road signs for the cars. Ask children to observe the shape and color of signs they see on a road. You might be able to obtain a booklet or poster from your State Highway Department. Ask a child to write the letter.

MEASUREMENT

USE STRING OR RIBBONS TO MEASURE THE CARS. PASTE THE STRINGS ON A CHART:

_____ JOHN'S CAR

_____ LINDA'S CAR

AND LABEL.

CHILDREN CAN ORDER THE STRINGS LONGEST TO SHORTEST OR VICE VERSA.

Experiment to see how the cars run on different types of surfaces.

Experiment with different ways to make the cars move, such as balloons, string, magnets, batteries, etc. How many ways can your students find? Put the materials out on a table and let your students experiment. Be sure to provide your students with some way to record their findings.

I like cars - TRUCKS, DOLLS, BOATS, BIKES, ETC., ETC.

1. Brainstorm for words about cars. Use the poem, "I Like Bugs" by Margaret Wise Brown as a frame for writing your own.

2. The "Friendly Book" by Margaret Wise Brown, Golden Press, is filled with "I like . . ." ideas. It also is a great frame for writing.

3. "Giraffes" by Mary Ann Hoberman is another poem about "I like."

   It begins: *I like them*
   Ask me why.
   Because they _____
   Because _____
   Because _____

   Try this poem with your class, substituting toys for giraffes.

NAMES OF CARS

Take a group of children for a walk. Examine cars for names. How many different names did you find?

-Record your list on a chart.

-Check to see if any of the cars have names of animals or places. If they are names of places, see if they can find these areas on a map.

-Discuss why the cars were named with their name.

Some of your students might enjoy reading "56 Consecutive Years of Automatic Design" in Sounds of Mystery. It shows pictures of cars made during the past 50 years.

Send your class to the library to find books about toys.

Provide a stack of blank books (two or three pages of paper folded in half). Encourage children to make a book about a toy.

HOW
LARGE
A
LOAD
CAN
A
TOY
PULL?

Be sure to provide your classroom with some toy catalogs.

Talk about the advantages of single wheels and pairs of wheels. Do wagons, cars, buses and trucks have single wheels on each corner or are they pairs of wheels on axles?

Compare a one-speed bike with a ten-speed bike.

WILLY AND HIS WHEEL WAGON
Gail Gibbons

Willy loves wheels. He builds a wheel wagon to keep his collection of wheels together and takes it with him wherever he goes.

Add macaroni, bottle caps or lids to your art center to be used as wheels in pictures or in building things.

Include a toy sand or water wheel in the sand or water table. You can often find them with beach toys. Have your students make their own water wheel.

SKATES
Ezra Jack Keats

Dogs and Skates twirl, slide and bump their way on a down-hill course. Story is told with pictures, rather than words.

THE BEAR'S BICYLCE
Emilie Warren McLeod

Safety rules for bicycle riding given throughout the story.

LET'S FIND OUT ABOUT WHEELS
Martha & Charles Shapp

This is a book you might want to use.

WORKING WHEELS
Helen Webber

A Kinder Owl Book.

WING AND WHEELS
Nancy Byrd Turner

This is a poem to use when talking about wheels.

GO ON A WHEEL SEARCH:

What do they move?

Does every machine have wheels?

Which toys have wheels?

Compare wheels - how are they alike? different?

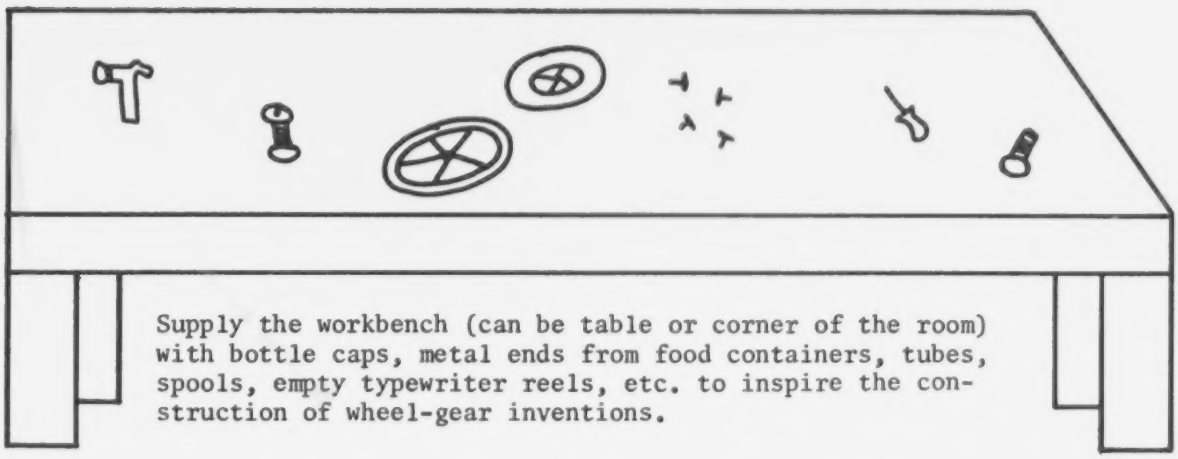
Examine everything in your room for wheels. How many wheels are there all together?

CURIOUS GEORGE RIDES A BIKE
H.A. Rey

If your students aren't familiar with Curious George, this would be a good time to introduce him to them.

FIND AN OLD STEERING WHEEL - ADD IT TO YOUR PLAY CENTER.

Toy Building



Supply the workbench (can be table or corner of the room) with bottle caps, metal ends from food containers, tubes, spools, empty typewriter reels, etc. to inspire the construction of wheel-gear inventions.

ME AND MY FLYING MACHINE
Mariana & Mercer Mayer

A small boy builds a flying machine.

PUT SOME STORIES, BOOKS AND PICTURES NEAR THIS WORK CORNER TO HELP INSPIRE STUDENTS TO CREATE WONDROUS KINDS OF TOYS.

PERHAPS CHILDREN COULD USE THIS CENTER TO MAKE GIFTS FOR THEIR FAMILIES.

Include these items in a building center:
- pencils
- scissors
- hammer
- nails
- wood scraps
- nuts
- bolts
- tape measure
- ruler
- thread
- string
- yarn
- boxes
- foil
- lids
- screws

Put these books in or near your center:

A MAKER OF BOXES
H.R. Wright

TRASH CAN TOYS AND GAMES
Leonard Todd

TOY BOOK
Steven Caney

PLAY BOOK
Steven Caney

THE SECRET TOY MACHINE
Polly Cameron

I found this book in the library. It has all kinds of possibilities for extensions in the classroom.

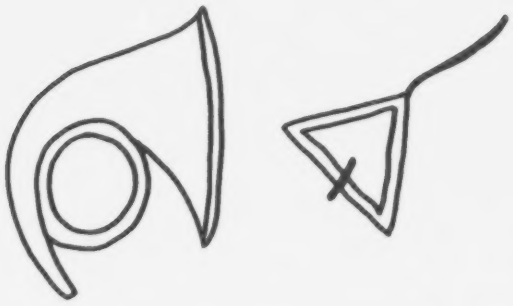
THE BIG ORANGE THING
Jerry Juhl

Charlie makes "the Thing" from old boards, nails, wire and string.

NORTHERN J. CALLOWAY PRESENTS SUPER-VROOMER! by Carol Hall

Tommy read about the race in the newspaper. The rule was you had to make your own car. Out of crates, boards, rope, etc. they built a car they were sure would make them champion racers.

Joyous Music Makers



NOW IS A GOOD TIME TO GET OUT THE RHYTHM INSTRUMENTS. WHAT KIND OF NOISE DOES EACH MAKE?

WHAT ARE THEY MADE OF?

HOW ARE THEY PLAYED? CLASSIFY AS TO WHETHER ONE HITS THEM, BLOWS THEM OR SHAKES THEM.

IF YOU DON'T HAVE ANY INSTRUMENTS TRY LETTING YOUR STUDENTS MAKE THEIR OWN. GET IDEAS FROM THEM. THE FOLLOWING BOOKS WILL BE GOOD RESOURCES:

TOY BOOK
Steven Caney

AN ACTIVITIES HANDBOOK FOR TEACHERS OF YOUNG CHILDREN
Doreen J. Croft & Robert D. Hess

HAVE A PARADE!

Check your library for filmstrips on instruments.

Compare a toy instrument with a real one. Do they make the same sound?

Use the following chants from Bill Martin's SOUNDS OF A POW WOW.

"Beat, Beat upon the Drum"
p. 10

"Jingle, Jangle, Wrist Bell"
p. 42

Use rhythm and toy instruments to:

-explore body response in feeling rhythm

-hear rhythm

-reproduce rhythmic sounds

-recognize high sounds and low sounds

-experience loud and soft

-create original melodies

If any parents or community people play an instrument, invite them to visit your class and give a demonstration.

The Toy Shop

Set up a toy store in your room. Instead of buying groceries, buy toys.

How much do toys cost? Do some comparison shopping using catalogs and newspaper advertisements.

Pretend you are a toy. How would it move? Move as though you are a puppet on a string. How would a wooden soldier move?

Is there anyone is your area who makes toys? Invite them to visit your classroom.

USE THE SONG "MY FAVORITE THINGS" FROM SOUND OF MUSIC. DO A FAVORITE THINGS BOOK.

MAKE A MURAL (Here's an easy way to do one)

1. *Brainstorm with children for: who is in the toy shop?*
   what are they doing?
   what toys are in the shop?
   what tools are in a toy shop?
2. *Have one group of children prepare a large paper to be used as background.*
3. *Give the other children pieces of paper. They draw, color, paint or use collage materials to make the people and objects in the toy shop.*
4. *After the things are drawn and colored, the children cut them out and glue them to the large paper.*
5. *This allows children to work at their own pace and keeps everyone busy until the picture is finished. Older children might be able to work on this independently.*

****

Use Mother Goose rhymes as frames for brainstorming and writing.

Sing this song to the tune of

"The Farmer in the Dell":

The elves are in the shop,
The elves are in the shop.
Hi, ho the derry-o,
The elves are in the shop.

The elves are making toys,
The elves are making toys,
Hi, ho the derry-o,
The elves are making toys.

What other verses can your students think of?

Teach this song

to your children:

Can your students make up more words for this song?

(Tune: Here we go Round the Mulberry Bush)

This is the way we make the toys, make the toys, make the toys.

This is the way we make the toys so early Monday morning.

BRAINSTORM FOR --

what elves do?

what they look like?

how they move?

stories with elves or dwarfs in them.

Compare elves with dwarves and fairies.

THE SHOEMAKER AND THE ELVES

Get your students to help rewrite this story for a play. Give the play for other classrooms. A musical version of this classic story can be found in Singing On Our Way by Lilla Belle Pitts, et al., Ginn & Company, 1960, or in <u>*Music is Neat*</u> *by Fred Willman, a former Follow Through music consultant.*

Use clay or salt and flour clay to make elves. Do this after children have read about elves in various stories.

Brainstorm for names of toys. Next to the name of the toy list write action words that tell what they can do with the toy.

WAGON - pull, push, ride
CAR - turn over, race, wind up
BICYCLE - balance, race, ride

Leave the chart in the room for children to use in their writing.

COME TO WORK WITH US IN A TOY FACTORY
Jean & Ned Wilkinson

This book shows some of the following people at work in a toy factory:

designer
model maker
machinist
packer

Can your students finish this chant?

On the toy shelf there is:

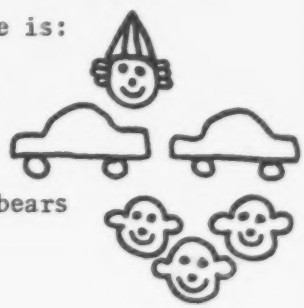
1 sleeping clown

2 clicking cars

3 smiling teddy bears

4 . . .

5 . . .



You can use this both on the flannel board or in the pocket chart.

Kids could make their own counting book.

GOLDIE THE DOLLMAKER
M.B. Goffstein

Goldie makes her dolls carefully, seriously, lovingly.

MOMMY, BUY ME A CHINA DOLL
Harve Zemach

This story adapted from an Ozark children's song is a cumulative story and is great for reading aloud. There is a trading and shuffling of animals and people and their normal sleeping places that children will find amusing. Build this story in the pocket chart. Bring in a real china doll for children to see. Compare it with a modern doll.

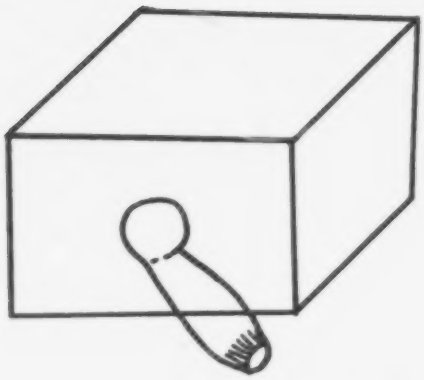
R I D D L E S

I slide down the hill.
I'm often painted red.
What am I?

I have four wheels.
I have a handle.
You can ride in me.
What am I?

How many more riddles can your class make up?

Make riddle books, riddle bulletin board or have a riddle day.



Paint or cover a box. Cut a hole in the side of a box. Take an old sock and cut off the foot. Attach the sock to the hole in the box. Fix the back of the box so you can place a toy in the box. Children put their hands through the sock and feel the object inside the box. They try to tell what the object is by feel.

Use some of these books in your classroom . . .

LOUIE by Ezra Jack Keats
Louie falls in love with a puppet. Notice the beautiful illustrations in this book. Be sure to point them out to your students.

ALEXANDER AND THE WIND-UP MOUSE by Leo Lionni
What other toys work by being wound up? Have your students mime a wind-up toy.

THE DOLL'S CHRISTMAS by Tasha Tudor

THE BEST-LOVED DOLL by Rebecca Caudill

* *

HOW DO YOU SAY "DOLL" IN - -

French - poupée	Danish - -ducke
German - puppe	Norwegian - ducke
Spanish - muneea	Turkish - bebek
Italian - KYK A	Japanese -ning-yoh

HOW DOES ONE SAY "DOLL" IN INDIAN?

* *

POEMS

THE LITTLE RED SLED
Jocelyn Bush

CHOOSING
Eleanor Farjeon

THE SWING
Robert Louis Stevenson

WHAT THE TOYS ARE THINKING
Ffrida Wolfe

DIFFERENT BICYCLES
Dorothy Baruch

THE NEW DOLL
Ogden Nash

SKATING
Herbert Asquith

SKATING
Lucille Wood

TRICYCLE
Rhoda W. Bacmeister

SLIDING
Myra C. Livingston

THE HOBBY HORSE
Ogden Nash

If possible, visit a museum which has a toy collection. Compare toys in the museum with toys made at the present time. How are they the same? different?

Perhaps there is someone in your area who has a doll collection. Ask them to visit your class or better yet, if the class can visit them.

Older students can talk to their parents or grandparents about the kinds of toys with which they played. Help the students to formulate their questions. Perhaps one of the adults would come to the room to talk to the class.

ARE YOU READING OR TELLING THE STORY OF HANS BRINKER AND THE SILVER SKATES BY MARY DODGE?

A great resource book for the classroom is KIDS' AMERICA by Steven Caney.

This large-sized paperback is published by Workman Publishing, New York, and costs $6.95.

It's filled with activities, projects, legends and information. Some of the chapter titles are:

American Heritage
American Know-How (making soap, candles, rope, forecasting weather, etc.)
American Homes
American Fashion
American School Days
Eating in America

S P A C E T O Y S

Design a station or site for a space vehicle to use in taking off or landing.

Dictate a news bulletin to report a happening about a space vehicle.

Design an astronaut uniform to wear.

Make a list of names that are used for space toys.

Do some comparing and contrasting. How are they the same? different? Which ones work and which wear out quickly?

What would Christmas be like on an imaginary planet? Write about it.

Using a space man (creature) describe the place from which he comes.

Use Marlene McCracken's brainstorming techniques to help children write ADVENTURE STORIES about their favorite space toy. Provide students with blank books. Water color washes, rubbings and printing would make a great background and illustrations for their stories.

B O A T S

Write or dictate a log of a boat's voyage.

Name the boat and create an insignia for it.

Find out the different ways boats move, such as with oars, sails, paddles and engines. Build a boat that moves by one of these methods.

If you have some boats, find out which ones float and which sink. Can the children discover why the boats sink or float?

A I R P L A N E S

Make a tape recording of noises that airplanes make.

Fly the airplane indoors and outdoors to discover how far it will go. Graph or measure the discovery.

Draw and categorize the shapes that were used for the airplane's parts.

Use reference books and pictures to label the airplane's parts.

Experiment with different weights, kinds and sizes of paper to make an airplane.

Put copies of these poems in your block area:

A GOOD PLAY
R.L. Stevenson

FUN IN A GARRET
Emma C. Dowd

Have you read THE BLOCK BOOK edited by Elizabeth S. Hirsch?

It will give you many insights into using blocks in the classroom.

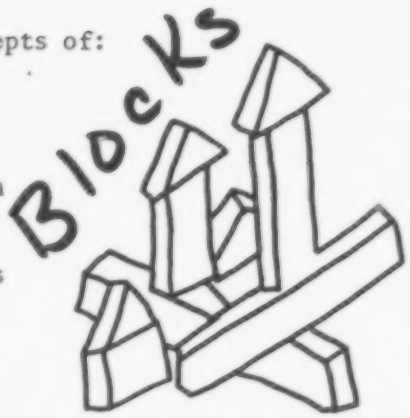
It is available at all of the Follow Through sites.

How many different kinds of blocks do you have in your room? Find all the toys in your room that can be used for building.

Blocks develop concepts of:
Math and Science
Relationships
Mapping

It takes cooperation to build.

Block building helps to develop eye-hand coordination.



As children use blocks in the classroom, keep your eyes and ears open to observe and record what children know about math, science and language.

Extend their learning by asking questions and suggesting ways to use building materials.

Give children shapes cut from vinyl or paper.

Have them cover the shapes with blocks. How many blocks does it take to cover a shape?

Use your blocks to build garages, cities, roads, ramps, etc., to use with cars, trains, etc.

Read THE CRATE TRAIN
by Dorothy Seymour

"The Nutcracker Suite"

This well-loved story is a natural for the classroom. It has been recorded in books, records, filmstrips, films, TV shows and magazines. It is a classical ballet. It has been written for children and adults. If you haven't used it in your room before, try it this year.

Ernst Theodor Amadeus Hoffman (1776-1822), wrote "The Nutcracker and the Mouse King."

Peter Illyich Tchaikovsky (1849-1893) wrote "The Nutcracker Ballet."

SOME IDEAS FOR USING THE STORY:

-Cherie Trottier, Zuni, New Mexico, made puppets to go along with the story. The puppets, a book and a recording of the music were placed in a center for children to use.

-Have students made their own puppets. Put on a puppet show for the class or another classroom.

-If you have some different types of nutcrackers, bring them to school. Have the children try them out.

-Have children retell the story. Perhaps each child could do a page for a book. Using many of the techniques (watercolor washes, crayon resist, tissue art, etc.) the students could illustrate the book.

-Make a mural.

-Play the music. There are a number of records made especially for children. Put one of them in your listening center.

-Have your students adapt the story into a play.

-Do a movement activity to the music.

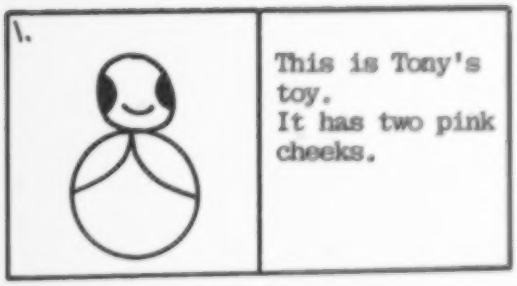
-Find out something about Tchaikovsky. Play some other music he wrote.

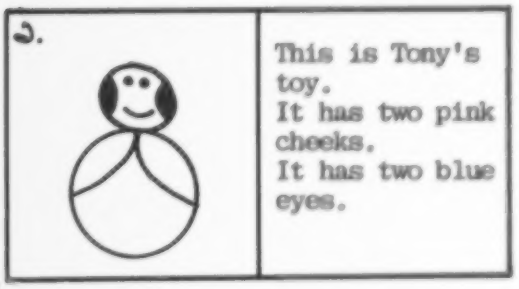
THE NUTCRACKER
adapted by Warren Chappell

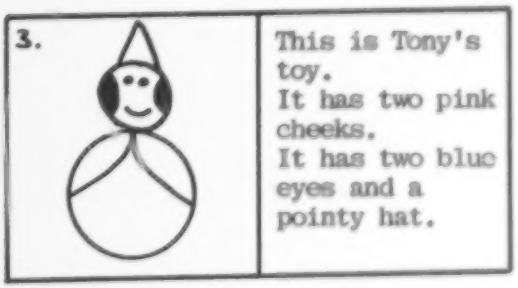
THE NEW NUTCRACKER SUITE AND OTHER INNOCENT VERSES
by Ogden Nash

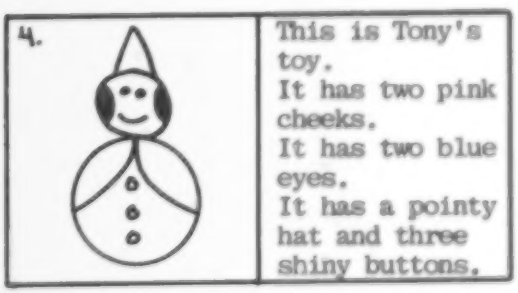
SVE filmstrips has a filmstrip and record of the Nutcracker Story.

Build-up Books









1. Select a toy from the room or one that a child brings to school.

2. Brainstorm with children for how the toy looks.

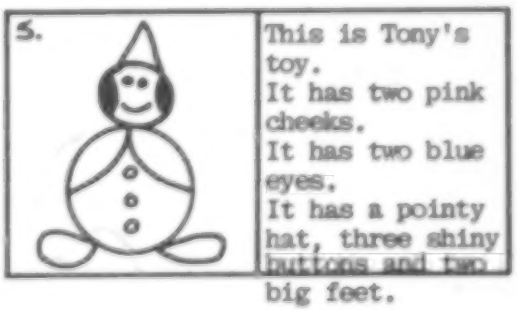
3. Draw the basic form of the toy (See #5 below) on half of a ditto page.

4. On the other half of the page record the cumulative text. Children read what it says and draw in the parts of the picture.

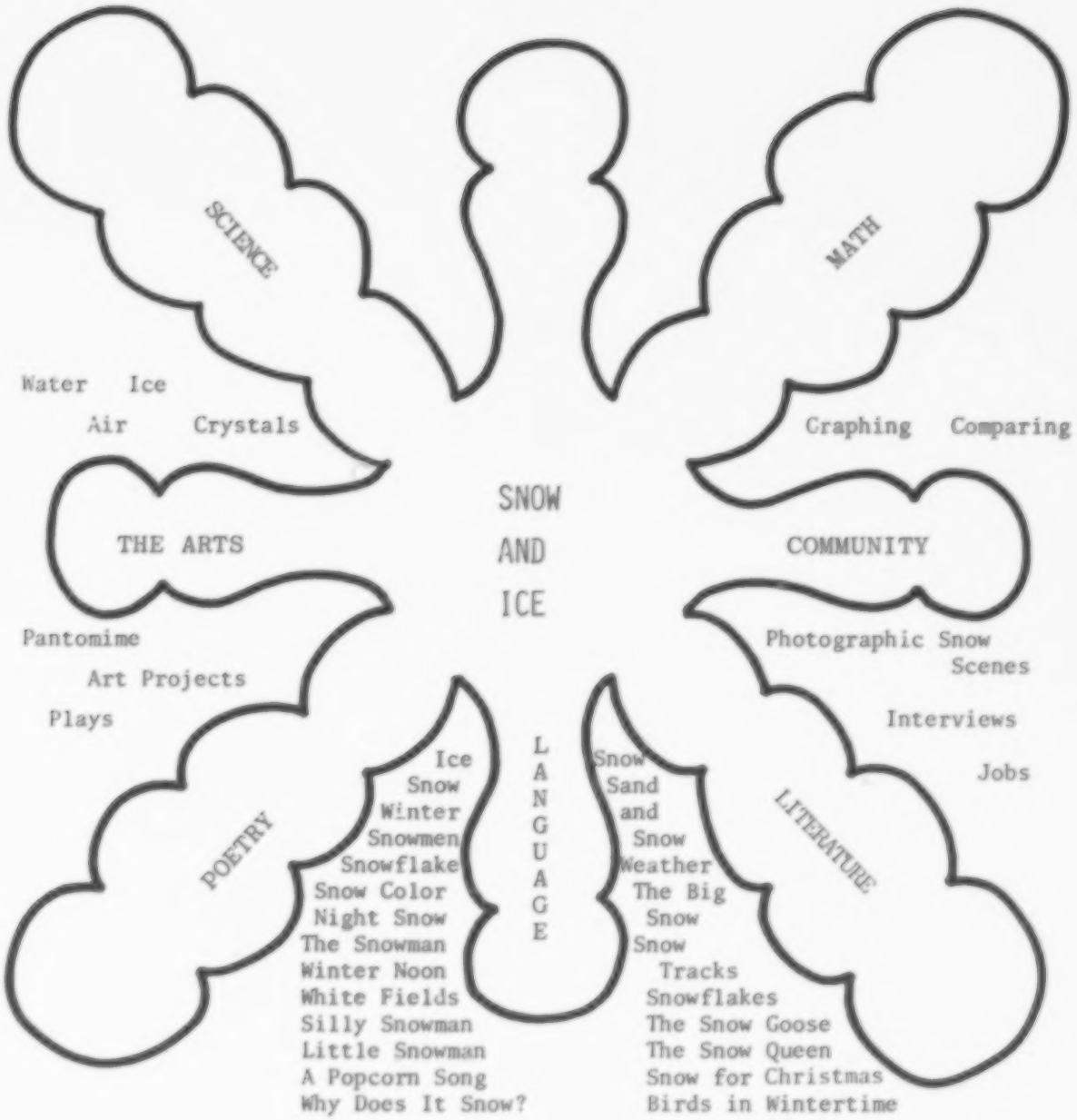
   OR

   You draw the pictures cumulatively and have the children record the text.

5. Once children have done one with the above help, they can do these books on their own.



Snow



From January 1979 Notes to Fort Yates Follow Through Staff, pp. 1-25.

The time that is spent in the following activities will be well worth the effort, if children gain an understanding of the main focus of this theme.

FOCUS 1: WATER CAN EXIST IN THREE PHASES: LIQUID, SOLID AND GAS. IN THESE ACTIVITIES CHILDREN WILL LEARN THAT SNOW IS A FORM OF WATER; SNOW CONSISTS OF WATER, AIR AND IMPURITIES.

ACTIVITIES	QUESTIONS
On a nice day, take a walk around your school. Use the senses to help describe the things observed. You might look for the way snow has drifted, what you can see, hear, smell, feel. Record your observations. For younger children, the teacher could record the observations; older children could do their own recording. Observations can be recorded by taking photos, making plaster casts, carrying a clipboard and pencil, etc. Take a walk to observe a specific area of phenomena: how much snow fell how cold is it in various places snow drift patterns strange snow sculptures determining the way the wind was blowing tracks INFORMATION FOR THE TEACHER: 1. If snow is compact, it has been wind-driven. One can easily walk on it. 2. If snow is fluffy, it has fallen without wind. 3. Wind, temperature and shelter determine the ground snow cover. When you return to the classroom after a walk, do some brainstorming about what you observed. How does snow feel? What does snow look like? Where did snow fall? Record children's responses on string lists so that the children will be able to make use of the words for their writing.	*Does snow smell?* *How does snow taste?* *How does snow feel?* *What can our senses tell us about snow, wind and temperatures?* *What sounds can you make in the snow?*

ACTIVITIES

Word lists:	clean	white	SNOW	crunches	under my feet
	fluffy			falls	in the field
	flaky			floats	from the sky
				drifts	

Read many poems and stories so that children will become familiar with language dealing with snow.

Go for a walk or let children work by a window. Sketch a favorite place as it would appear on a summer day and a winter day. Compare and contrast. They might write:

On a summer day my favorite place has ____,
but on a winter day my favorite place has ____.

or

In summer we hear ____, but in winter we hear ____.

Some other frames you might use: *Snow feels _____.*
Snow smells _____.
Snow tastes _____.

Look for snow sculptures that have been formed naturally. Where are the sculptures found? Can children give an explanation for how the scuplture was formed?

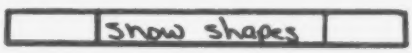
INFORMATION FOR THE TEACHER:

Snowflakes follow the airflow around the objects. Where the air moves rapidly, snow moves on and does not stop. Where the wind speed falls, snow falls, too. Snow sculpture is a result of wind patterns. Where the wind speed is high, snow is blown away. Where the wind speed is low, snow is deposited in greater amounts.

Observe the cloud formations before, during and after a snowfall.

Use mittens, gloves, books, hats for classification activities.

ACTIVITIES	QUESTIONS
Observe the color of snow at different times in various locations.	*What color is snow?*
INFORMATION FOR THE TEACHER: Even though it is made of ice, snow appears white in sunlight. This is because snow reflects and scatters sunlight equally well at all times. Color will vary with sky and the amount of impurities present.	*Why are snowflakes colorless when they melt, if they are white before?*
Collect some snowflakes on microscopic slides. Place the slide and a metric ruler under a microscope. Use the ruler to measure the diameter of the snowflake. Find out the diameter of the largest, smallest one, who found them, etc. Graph or chart your information.	*How big are snowflakes?*
Collect snowflakes and observe them with a good magnifying glass or microscope.	*What do snowflakes look like?*
Collecting snowflakes: Place some microscopic slides, pieces of cardboard and a can of lacquer spray in a freezer. When it is snowing, place a slide on a piece of cardboard and quickly take them outdoors - you don't want them to become warm. Also do not touch the slide, as your body heat will warm it up. Spray a thick layer of lacquer on the slide. Let some snowflakes fall on the sprayed surface. Place the slides in a sheltered area outside. Allow the lacquer to dry for at least two hours.	*How can you collect snowflakes?*
INFORMATION FOR THE TEACHER: You should do more than one slide at a time. Once the children know how to do this, they could do it on their own. As the lacquer dries, the snowflakes should leave an imprint. When the drying is compelte, the snowflakes can be melted. Be sure the lacquer is completely dry before touching the slide.	

ACTIVITIES	QUESTIONS
Study snowflakes under a microscope OR Place a piece of black construction paper or cloth in the freezer compartment. On a snowy day, take a piece of the paper outside and let some snowflakes fall on it. Use a hand magnifier to observe each flake. Use one of the above collecting techniques and let children see how many different shaped crystals can be seen. Older children might be able to sketch their observations. Keep a record of weather conditions (temperature, wind, moisture) on the days you had the best results with collecting snowflakes. Collect as much information as possible about snowflakes by doing various activities. 1. measure the snowflakes 2. observe snowflakes with a microscope or magnifying glass Chart and record your information. Example:  INFORMATION FOR THE TEACHER: Snow crystals always have six sides, but each snow crystal has a different pattern. It takes approximately 16 to 32 snowflakes to make one inch. Snow and ice are made up of air. This gives it lightness and buoyancy. Explore frost and snow patterns on tree trunks, hoods of cars, windows, signs, etc. Place ice into a glass. Add water until the glass is about 3/4's full. Observe the formation of water droplets on the outside of the glass. Taste the droplets. Ask children if they can explain where the droplets came from. Older children may be able to do this.	*Are all snowflakes alike?* *How many sides do snow and ice crystals have?* *What causes frost crystals to form on windows?* *What is snow made of?*

ACTIVITIES	QUESTIONS
The evaporation-condensation cycle can be observed through the use of a terrarium. Informal Education-Science has directions for building a terrarium.	*How do snowflakes form?*
If children breathe on a cold mirror or window, they can easily observe moisture condensing on the mirror or window. Breathe into cupped hands.	*What is ice made of?*
Observe windows steaming up in the classroom or home.	
Bring a vaporizer or bottle warmer into the room. Connect the unit and add water. Place bricks or blocks on either side of the warmer. Place a pan with ice cubes on the bricks over the warmer. Watch the underside of the pan to see vapor droplets turn cold, condense into drops of water.	
HINT: Do this with close adult supervision. Do this several times.	
INFORMATION FOR THE TEACHER: The hot vapor rising from the warmer is steam. Clouds and fog are also vapor. Tiny droplets of water in clouds - when droplets come together in cold air, they become too heavy to float. They fall down as raindrops. Water vapor which floats in the air is so fine that we cannot see it. Water vapor in the upper air or clouds may become so cold that it freezes and turns to tiny crystals of ice. These ice crystals grow as droplets freeze around them. As they become heavier, they fall. If the air below is very cold, the crystals fall as snow. If the air is warm, they melt and fall as rain. Water freezes when temperatures drop below 0^{o} C. or 32^{o} F. Frost is caused by water vapor condensing on a very cold surface. Frost can occur when the temperature is 32^{o} F. or less and the ground and plants are very cold. As water vapor in the air touches them, it freezes and the ground and plants are covered with frost.	
Crystals have different shapes and are formed in different materials. Put alum (purchased in a drug store or spice section of the grocery store) and sugar crystals on a slide under a microscope (low magnification). Children can compare the crystals.	*Are there other kinds of crystals?*

Make a crystal garden using these materials:

- a glass dish
- pieces of coal or cellulose sponge or brick
- 4 tablespoons water
- 4 tablespoons laundry bluing
- 4 tablespoons ammonia
- jar

Wash the coal with clear water until the pieces are thoroughly wet. Arrange the pieces of coal in a shallow glass dish (do NOT use metal). Mix the other ingredients in a glass jar. Pour this mixture over the coal. Add a few drops of food coloring to the coal, if you want. Sprinkle the salt over the coal or rocks. Within a few hours crystals will begin to form. If you want your garden to grow more, just add more liquid and salt. If the bowl should be bumped and your garden is "destroyed," just add more liquid and it will regrow.

HINTS: Put a magnifying glass by your garden and let the children explore the world of crystals.

Don't let any of the crystals grow beyond the bowl as it could damage furniture.

You probably already have a good collection of crystals around the house. Use a magnifying class to sort the collection according to shape. Here are a few suggestions:

ice - scrape crystals from the refrigerator or get some from outside.
salt - rock salt is best
sugar
soda
epsom salts
rock - naturally occurring crystals are called minerals

Try making some ROCK CANDY:

a. Put 1/2 cup water in pan.
Add 1 cup sugar.
Heat over low flame until sugar dissolves. Do not stir.

b. Pour warm syrup into a glass.
Hang a weighted string into the syrup.
Let stand at room temperature.

c. Large crystals will begin to form in about a week.
You may need to break the crust to keep water from evaporating.

Again, have a magnifying glass near so children can observe the crystals.

Here's another way to demonstrate the formation of crystals:

Materials:
- stove or hotplate
- quart mason jar
- 1 quart water
- 3 ounces powdered alum
- pinch of tintex or veg. dye
- circle of blotting paper, filter paper or cheese cloth

ACTIVITIES	QUESTIONS
Procedure: Fill mason jar with water, pour into pot. Heat to rolling boil. Add 3 ounces of alum to boiling water. Boil for a few moments, turn off heat. Stir, add pinch of color. Remove from stove, pour into jar through filter. Allow to stand 24 hours. Tap jar occasionally while mixture is cooling to help formation of crystals. Crystals form in the bottom of the jar. If you suspend a small basket made of pipe cleaners or a ball of cotton in the solution, the crystals will adhere to it and make a decorative object.	
Bring snowballs or icicles inside to melt.	*Why does snow melt?*
Lay squares of colored paper, wood or material in the snow. Be sure they are all of the same size. Let them sit in the sun for several hours. Measure the depth to see how far they have sunk. Record the measurements. Which color has sunk the farthest?	*Why does snow melt first on certain objects?*
Observe around tree trunks - dark and light - where has more snow melted?	*Why is there snow only at certain spots?*
Observe the roofs of buildings where the snow has melted. Record the colors of the roofs. Can you draw any conclusions about how well a building is insulated by the amount of snow left on the roof?	*Why does snow melt off the roofs before it does other places?*
Put drops of food color or paint on the snow. Observe the melting which occurs.	*How can snow be melted?*
INFORMATION FOR THE TEACHER: Ice and snow will float because ice has so much air. Melting is affected by temperature, pressure and salt.	*Why do we use salt on our streets and roads?*
Try melting a cup of compacted snow and a cup of fluffy snow. Do they equal the same amount of water?	

ACTIVITIES	QUESTIONS
Collect some snow at different times and from different locations and bring it into the classroom. Give children an opportunity to make some predictions about what will happen when they melt the snow. Keep a record so that children can compare what happens to their predictions.	*Does one cup of snow equal one cup of melted snow?*
Try different ways to melt snow. Ask children to think of various ways to melt snow. Try all of their suggestions. Find out which way works best.	*Will equal amounts of snow collected from different locations or on different days yield equal amounts of water?*
Bring in a jar of snow. Ask children to try to find ways of keeping the snow from melting. (Wrap in cloth, newspapers or insulating material). Ask the children to build a snow house outside. Put a snowball inside the snow house. Watch to see whose snow house kept the snowball the longest. Whose snowball melted first?	*How many ways can be found to melt snow?*
INFORMATION FOR THE TEACHER: As snowflakes pile up, air pockets form between the points and arms. If ten inches of snow are melted, there is only one inch of water. The rest is air. Air makes a blanket of snow light. Because of this some animals can bury themselves in snow and sleep all winter.	*How can snow be kept from melting?*
When snow covers the ground it is much warmer under than over. Put a thermometer under a snowbank. How does the temperature compare with the temperature above ground?	*How long does it take to freeze a can of water?*
Bury a jar of water in a snow bank. Will it freeze?	
Build an igloo.	
Bring in some books about how Eskimos build their homes.	*Does hot water freeze faster than cold water?*
Bring in information about snow survival.	
Try freezing a can of water on the window sill.	
Freeze a can containing a little water. Will it take as long to freeze as a can that is full of water?	
Use a flat cake pan and a tall can. Place the same amount of water in each. Which freezes first?	

ACTIVITIES	QUESTIONS
Place a can of hot water and one of cold water outside. Be sure both have equal amounts of water. Observe which one freezes first.	*How is an icicle formed?*
Go for a walk and look for icicles. How big is the longest icicle you can find? Where do the icicles form? Look for different shapes of the icicles.	*Can an icicle be bent?*
After returning to the classroom, brainstorm with the children for what an icicle shape could be part of. This could then be the start of an ice picture which could be illustrated with foil to give an icy appearance.	*If it is warm enough for the snow to melt, how can it be cold enough to freeze icicles?*
Keep a record of the longest icicle you found on your walk. Ask children to see if they can find one that would be longer? fatter? shorter?	*Do streams ever freeze completely?*
After a walk, record information about the icicles found. It might look something like this:	*Why does a lake freeze first around the edge?*
Take a walk to the river. Can you find any patterns on the frozen water? What caused them?	*Why does ice melt first around the edge?*
Go for a walk. Find some icicles that look as though they have been bent. Ask children to see if they can bend an icicle into a different shape. If you find a bent icicle, how did it get that way? Children will have to use good observation to find out.	

Name	length	width	where found
John	10"	4"	school door north side
Kevin	4"		

INFORMATION FOR THE TEACHER:

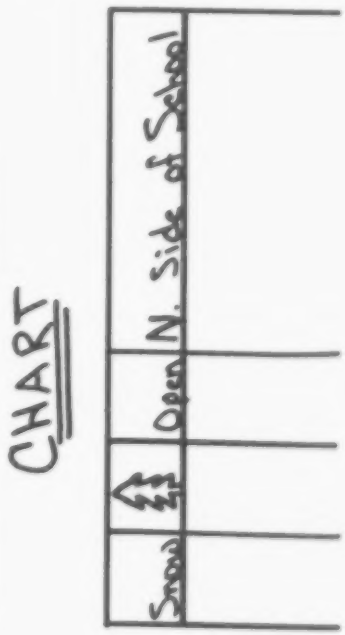
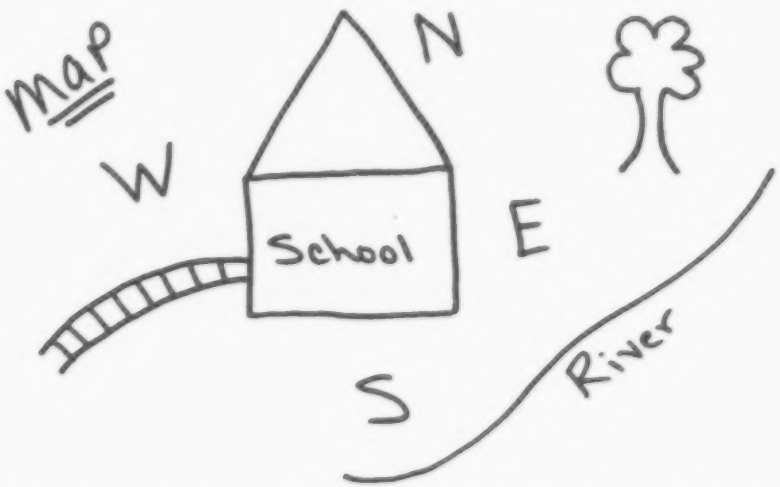
Icicles can form only when the temperature of the air is below freezing. Under these conditions, snow on a roof can still melt from heat coming through the roof or from the sun's heat.

ACTIVITIES	QUESTIONS
Make fruit juice popsicles. Make ice cream. You can find recipes in Creative Food Experiences for Children. Put jello in a paper cup. Add a popsicle stick. Freeze. Observe the ice crystals that form. Fun to eat. Fill two identical bowls almost to the top with water. Put one bowl outside and leave the other bowl in the room. When the outside bowl of water has become ice, bring it back to the classroom. Let children compare the two bowls and discuss what happened. Why did the outside bowl of water become ice? Why didn't the bowl inside become ice?	
Older children might be able to take the temperature of snow in a snowdrift. Or, fill cups with snow from different areas. Place a thermometer in each cup.	*What temperature is snow?*
Fill a glass, jar or bowl with water. Place an ice cube in it. Lay one end of a string on the ice cube. Ask children if they can pick up the ice cube without touching it. If they try picking it up with the string, the string will come off. Replace the string on the ice and sprinkle a little table salt on the string and ice. Leave a few seconds and pick up the ice cube with the string. Make ice cream.	*How can you make snow colder?*

INFORMATION FOR THE TEACHER:

Salt is a frozen solid.
Heat is needed to melt it.
Salt (frozen crystal) takes heat from the water, thus lowering the water temperature.

Some heat goes to change salt to liquid so that salt can also be used on icy roads.

ACTIVITIES	QUESTIONS
Write to your local weather bureau to find out the average snowfall for a day, month, year.	*Is the depth of the snow the same in all areas around the school? If not, why not?*
Measure the depth of the snow in different areas around the school. You will need a snow stick. in the open under a tree under a pine on different sides of a building in a ditch under a bush	
Record your information on a chart or map of the area.	
	
Invite a resource person (someone who works with one of the snow machines) to talk to your class.	*How is snow cleared off the roads?* *Who are the people who clear the snow?*
See if you can arrange for children to see the inside of a machine.	*What kinds of machines or tools are used?*
Make a collection of news stories.	
Try to bring in as many books as possible dealing with people, machines and tools, which have something to do with snow: snow removal ski areas sellers of snow equipment	*What do the machines look like on the inside?* *Where are the machines kept?*

ACTIVITIES	QUESTIONS
Make a survey of your class or school. Graph or chart your results. Have your students talk to their parents and grandparents to find out if the same kinds of activities take place now as then. What activities are different? Same? Collect pictures of your students playing or pictures of snow activities from newspapers or magazines. Make a list of activities children like to do in winter. From this list, children can write: Laughing children catch snowflakes on the tips of their tongues. What conditions are right for packing snow? How can you make nonpacking snow into packing snow? Try making a square snowball.	*What winter games do children play?* *Why are snowmen usually round?*

FOCUS II: OBJECTS THAT ARE WHITE REFLECT ALL THE LIGHT. SINCE SNOW IS USUALLY WHITE, IT REFLECTS THE LIGHT INTENSELY AND CAN CAUSE EYE INJURIES.

Snow blindness is a great hazard to many people. Discuss the necessity of protecting the eyes.

Make snow goggles from cardboard. Cut a very small slit for the eyes. Go outside on a bright day with and without the goggles.

Observe how football payers put dark lines under their eyes? Why?

INFORMATION FOR THE TEACHER:

Dark colors absorb solar energy more readily. This has many implications for daily life: dark colors can more easily be seen in snowstorms, they will help to keep us warmer and can help to protect our eyes.

Take a walk or find pictures of signs connected with snow or storm warnings, clearing of snow, etc. Use the pictures for matching and vocabulary study. Make a collection of photographs from newspapers and magazines.

Put a doll and proper winter clothing for it in the play house area. Children can dress the doll properly for the cold weather.

Discuss winter clothing, safety procedures during storms.

Have a poster contest. Children can make posters about winter safety. Display your posters in the school and stores around your town.

Learn some exercises you might do in a car, if you are trapped in a blizzard.

To prevent frostbite, it is necessary to dress warmly. Brainstorm with children for the type of clothing to wear. Use catalogs to find pictures of the items. Children could cut out the pictures and make a warm clothing book. They could also use the catalogs to find out how much it would cost to buy these items.

TRACKS

Snow tracks can provide us with many interesting activities, observations and discussions.

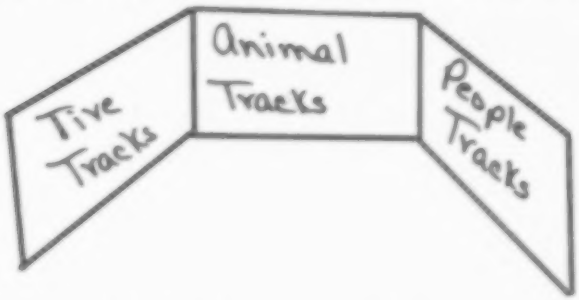
Take your class for a walk to look for tracks:

Who or what made the tracks?
What is the shape of the track?
Can the children make tracks like some that they see?
How was the track made?
Is the animal that made the track a climbing, burrowing, flying, running or jumping animal?

Some activities you might like to do with your class:

1. Measure the track - its length, width, depth.

2. Make a classification game using pictures of tracks.



Collect pictures (or take your own photos) of tracks. Make a board like above. Children place pictures in one of the classifications. Try to get children to verbalize reasons for their selections.

3. Match the picture of a track with the picture of an animal.

4. Follow tracks in the snow. Where do they lead? Does this give a clue as to who or what made the tracks?

5. Make a guess as to how the animal was traveling: walking
running
etc.

6. Determine what kind of animal/object made the track. Use books, etc.

7. I saw this idea at the Grand Forks Teacher Center: Sketch a set of tracks on an acetate sheet. Lay an acetate sheet for an overhead projector on top of the set of tracks. Use a magic marker to draw the track.

8. Measure the distance between each set of tracks.

SOME IDEAS FROM MARLENE MCCRACKEN

BRAINSTORM for signs of winter. Here is a frame from Marlene McCracken which you might like to use.

_____(a sign of winter)	Example:
_____(describe this)	Winter is snow
_____(tell what it is doing)	White, fluffy flakes
_____(tell where it is)	Twirling
_____(end your poem)	

BRAINSTORM for one sign of winter and tell four things about it.

winter is white snow
twirling
drifting
_____
_____

BRAINSTORM for signs of winter you HEAR
SEE
FEEL
SMELL

BRAINSTORM for what you don't SEE
HEAR
SMELL in winter.

BRAINSTORM for: new uses for snowballs
menu for a snowman
how a snowman would sound when he walked
talked
ran

BRAINSTORM for what is good to eat
drink that is ice cold.

Here's another frame from Marlene McCracken:

On a winter _____.
A (describe an animal or a character - tell what it does).
It (What does it hear or see? Tell what it does under this new condition).
At last (end your story).

SOME IDEAS FROM MARLENE MCCRACKEN Continued:

EXAMPLE: On a winter night
A lively young jack rabbit hopped silently in the winter's night.
It heard a soft sound in the frozen ground behind him.
Suddenly he turned and came face to face with another rabbit.
At last he had found a playmate.

* *

O D D S A N D E N D S

1. Keep a list of snow words. Add to the list as words occur in class or in literature - parka
blizzard
storm

2. Mix up the letters in some of the words and have children rearrange the letters to form the word. This is easiest done in using letters that children can manipulate.

3. Make up and sing a snow song using the melody for Ten Little Indians.

4. Use the following frame for flannel board or for children to make up their own book:
The first little snowman . . .
The second little snowman . . .

5. Winter is a great time for developing -er and -est words.

warm	warmer	warmest
cold	colder	coldest
high		
low		

What was the warmest day this month?
What was the highest temperature?
Is it colder today than it was yesterday?

6. How does snow and winter weather affect the work people do? A good theme for investigation.

7. Send your children to the library. Have them find all the books they can about snow. Classify the books according to their content, whether they are factual or fiction, etc.

8. Take a polaroid camera with you on your walks. Take lots of pictures.

9. Pantomime: a snowman coming to life - What part of the snowman will move first and last? Where would he go?

building a snowman, snow sculpture

a melting snowman

a snow fight

shoveling snow

walking through drifts

this vocabulary: whirling, twirling, gliding, sliding, coasting, skating

10. Snow Carnivals - bring in advertisements. Find out what kinds of activities are being planned. Make a snow sculpture. Perhaps there could be a school contest.

11. Find advertisements about winter travel. Where do people in your area go for a winter vacation? Take a survey.

12. Find out what you can about winter sports.

Take a poll to find out what sports are played by students in the school.
Look up in catalogs for snow sports equipment. Pick out what is needed for a sport. What would it cost?
Graph the students in the class and their favorite sport.

13. Write a play about a snowman, snowlady or snow family with a group of the children. Put the play on for the others in the classroom or for another room.

* *

DEVELOPING LANGUAGE WITH SNOW POEMS

With poems you can:
READ IT ALOUD
SHOW THE PRINTED FORM
BRAINSTORM
CHANT
USE AS A FRAME
ILLUSTRATE

"Beautiful Soup"
Lewis Carroll
The Poetry Troupe

This is a good poem to use and then do some brainstorming about what kinds of things a snowman would like to have in her/his soup.

Children could then write a Snow Soup recipe.

"Spring"
Karla Kuskin
In the Middle of the Trees

Great poem to use as a frame. Spring can be changed to:
I'm shouting
I'm singing
I'm swinging through _____

"Tracks in the Snow"
Margaret Hillbert
Potato Chips and a Slice of Moon

Read this one before or after going out to find tracks.

"The Hat"
Karla Kuskin
In the Middle of the Trees

Another great poem to use for brainstorming and as a frame for children to do their own writing.
Somebody gave me a _____.
It has _____.
I tried it on a _____.
I tried it on a _____.
And then _____.
Brainstorm for other winter things which someone might give.

Use the hats which children wear to school for a classification activity.

Children can draw and label their own hats. Display their writing along with their illustrations.

"Snow"
Karla Kuskin
In the Middle of the Trees

Children will enjoy using this poem as a frame for their own writing.
We'll _____ in the snow
and _____ in the snow
and _____ in the snow
in a _____ _____.

"Winter"
Aileen Fisher
Potato Chips and a Slice of Moon

This is a good poem to use as a frame and at the same time contrast winter with summer.
Winter doesn't have _____
under the bright green leaves,
But winter has _____.

"Skating" Barbara Juster Esbensen Potato Chips and a Slice of Moon	*This is a good poem to pantomime. Try putting some music with it also.*
"Snowflakes" Debbie Hastings Potato Chips and a Slice of Moon	*Children will enjoy saying the vocabulary of this poem. It is also an easy poem to use as a frame.*
"The Snowman" L.B. Scott	*Use this poem for some brainstorming activities with the children. They might enjoy using it as a frame for writing their own poem.* *The _____ heard wonderful* *Sounds of _____* *Sounds of _____* *Sounds of _____*
"Winter" Jean Jaszi	*Use this poem after a walk with the children.* *See the _____* *See the _____* *See the _____* *See the _____* _____ _____
"Snow Color" Aileen Fisher	*This poem lends itself to illustration through water color wash or chalk on wet paper.*
"The Frost Pane" David McCord	*Let children frost up the window pane and draw on it.*
"Little Snowman" Leland B. Jacobs	*This poem can easily be made into a finger play.*
"Cynthia in the Snow" Gwendolyn Brooks	*Contrast this author's idea of snow color with that of Aileen Fisher's.*
"Sleet Storm" James S. Tippett	*Put out a lot of collage materials and let children use them to illustrate this poem.*
"A Popcorn Song" Nancy Byrd Turner	*Sing this poem to the tune of "Sing a Song of Sixpence."*

"The Mitten Song" Marie Louise Allen	*Make a collection of mittens, sort and classify by material, color, etc. Brainstorm for words describing their own mittens.* *Collect autographs of people's hands. Measure children's mittens and gloves. Teach the nursery rhyme, "The Three Little Kittens." Brainstorm with children for where the mittens could be. This is a great activity for working on prepositional phrases. It's almost impossible to answer without using a preposition.*
"Snow" ISSA	*Try substitutions for the first and last line of this poem. What else could you do with snow besides eat it?*

* *

OTHER POEMS:

There are many more poems which deal with the subject of snow. Many of you have excellent ideas of how they can be adapted and used with children. Here is a list of some others that I have found:

"Winter Season"
Anonymous

"Snow"
Dorothy Aldis

"Snowflakes"
Mary Mapes Dodge

"Snowy Morning"
Lilian Moore

"Snow"
Tessa White

"First Snow"
Marie Louise Allen

"Pine Tree Princess"
Anonymous

"White Fields"
James Stephens

"Morning in Winter"
Harry Behn

"Snow Toward Evening"
Melville Cane

"Why Does it Snow?"
Laura E. Richards

"Snow"
Elizabeth Coatsworth

"The Winter Wind"
L.B. Scott

"Snowflakes"
Henry W. Longfellow

"Snowflakes"
Elizabeth L. Cleveland

"A Story in the Snow"
Peral Riggs Crouch

"The Snowman's Resolution"
Aileen Fisher

"Wind"
Aileen Fisher

"Snowflakes"
Marchette Chute

ART IDEAS

There are many, many art ideas you can use with children that have a theme which will help to develop concepts and language about snow. Since you already probably have many ideas, I am listing only a few to get you thinking.

SNOW SCULPTURE

Beat 2 cups of granulated detergent and 1/2 cup of water. Add more of each until "snow" stands in peaks. Use this fun project to build snow sculptures and scenes.

MELTED CRAYON SNOWFLAKES

Materials: wax paper
scissors
crayons - old
newspaper
iron
pencil sharpener or knife

Procedure: Cut out 2 circles the same size from the wax paper. Fold both together into thirds. Cut a snowflake. Open the snowflake and place one of them on several thicknesses of newspaper. Using a knife or pencil sharpener, sharpen different colors of crayons to make shaving. Put the crayon shavings on top of the snowflake. Put the other snowflake on top of the crayon shavings, matching the design as well as you can. Put several layers of newspapers on top of this. Iron over the newspaper-covered snowflake with a hot iron. Iron until the crayon is completely melted.

WHAT OTHER ART TECHNIQUES CAN BE USED TO MAKE SNOWFLAKES?

SNOW SCENE

Fold a piece of construction paper into a box form (dark colors are best). Draw a picture with white chalk, paint, crayon or use collage materials. Make tiny snowflakes from white paper and glue them to string. Hang the string from the top of the picture. Try using a sponge for painting the background.

THE SNOWMAN BOOK
Kaufman

SNOWMOBILES
Morgan, Julie

THE SNOWSTORM
Chong

THE SNOWY DAY
Keats, Ezra Jack

SNUG IN THE SNOW
Low

SLUSH! SLUSH!
Kessler, Ethel & Leonard

THE SELF-MADE SNOWMAN
Krahn

SNOW FOR CHRISTMAS
Bowen

THE SNOW GOOSE
Gallico

SNOW ON BLUEBERRY MT.
Meader

THE SNOW QUEEN
Anderson, Hans Christian

LUNY LUNA: THE WORM WHO DIDN'T KNOW WHICH WAY TO TURN-Snow Sculpture

SNOW TRACKS
Craighead

SNOWFLAKE
Hogner

SNOW
Eastman

BIRDS IN WINTERTIME
Eitzen, Allen
Little Owl Book

JUNIOR SCIENCE BOOK OF RAIN, HAIL, SLEET AND SNOW
Larrick, Nancy

THE SNOW AND THE SUN
Frasconi, Antonio

SNOW IN THE CITY
Hader

SNOW
McKie

THE BIGGEST SNOWSTORM EVER
Paterson

THE SNOW BABY
Hillert

SNOW BIRTHDAY
Kay

THE FIRST SNOW
Coutant

WHEN WILL IT SNOW?
Hoff, Syd

THE BIG SNOW
Hader, Berta & Elmer

SNOW SURVEYORS
Colby, C.B.

WONDERS OF SNOW AND ICE
McFall, Christie

SNOW IS FALLING
Branley, Franklyn

WINTER - A FIELD TRIP GUIDE
Russell, Helen Ross

NOW THAT DAYS ARE COLDER
Aileen Fisher

WHERE DOES EVERYONE GO?
Aileen Fisher

WEATHER
Bill Martin, Jr.
Kinder Owl Book

TEN LITTLE CATERPILLARS

AT HOME ON THE ICE
Miller, Particia K.

HOW BIRDS KEEP WARM IN WINTER
Martin, Bernard

SNOW TRACKS
George, Jean

SAND AND SNOW
Kuskin, Karla

SNOW CRYSTALS
Bentley, A.

IN THE FLAKY, FROSTY MORNING
Kuskin, Karla

A WALK IN THE SNOW
Busch, Phyllis S.

SNOW AND ICE: EXAMINING YOUR ENVIRONMENT
Couchman, J.K.

Water, Water Everywhere

As teachers we have a responsibility to help children become aware of and interact with things in their environment. There are many ordinary, everyday things in our life which we take for granted, but which can be a source of exciting and involved learning. Water, in its many forms, is close at hand and easily obtainable for study. We need only to recognize the possibilities inherent in it for learning. I hope the following pages will lend you and your students into some exciting encounters with water as it occurs in our lives.

Use the study of water to develop:

OBSERVATION SKILLS

RECORDING SKILLS

HYPOTHESIZING SKILLS

INFERENCE SKILLS

From March 1980 Notes to Fort Yates Follow Through Staff, pp. 2-17.

EXPLORE A RIVER
POND
STREAM
LAKE
Bring some things back from your expedition to use in your water table.
A GOOD TIME TO STRESS WATER SAFETY
Make a salt and flour map of your waterway. Use items collected on walks to add to your map.
Choose a location to study with your class.
-Photograph your location at different times of day and during your seasons.
-Look for tracks of animals and people.
What can they tell you about how the water is used?
Has the water always been at the same height?
What might have affected the height of the water?
-Find other evidence of humans or animals.
-Observe your water location before and after a rain.
-Observe where the ice begins to melt in your waterway.
Observe closely the stones and rocks located in and near your water location. The wearing down action of water can be illustrated in the classroom by using a rock tumbler. The rocks you tumble make beautiful additions to your classroom. Use them as counters, discussion starters (colors, sizes, shapes) and to help children compare and contrast (before/after, rough/smooth, shiny/dull).
Can children make waves in the water? How can they do it? What is a wave?
What is the temperature of the water?
Would you guess in the middle or along the edges?
How deep is the water? Can students devise a way to find out?
Observe the kinds of plants which grow near a water location. Do the same plants occur 5 feet, 25 feet and further away from the water? If they do, do the height and appearance of the plants differ?

HYPOTHESIZE - INVESTIGATE - ESTIMATE

In this ESS Unit, Grade Two and older children experiment with trying to make a small lump of clay float in a container of water. They make shapes and fill them with items to find out how much their boats will hold.

Clay Boats

Have enough supplies so that each child who will be working can have their own.

Work with small groups of children.

Provide free time for children to experiment, hypothesize and investigate.

Your questions, which EXTEND and ENHANCE are extremely important to the learning process. The teacher's guide will help with this important skill.

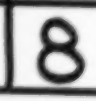
Make a balance scale available to children for use during their study.

What other things can be used as boats?
- cups
- foil
- containers from McDonald's

After working with their clay boats over a period of time, they will have some sense of what makes things float, shapes which make better boats and particular designs which hold a larger load than others.

Suggest that children look at and talk with children who have made successful boats.

Use as cargoes:
- erasers
- chalk
- paper clips
- small uniform weights (washers, bolts, etc.)

	Boat 1	No.	Boat 2	No.
JOHN		4		6
SUSAN		1		2
DERRICK		6		1

Make a record of how many "men" each boat can hold.

Record the children's suggestions for "improving" the boats.

John - "Maybe if I made it flat."

Eric - "I'm going to make a long boat."

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- - - ESPECIALLY FOR OLDER STUDENTS - - -

With your guidance, students might develop a multimedia presentation about a water area near the school.

Using: *Photography*
Original Poetry
Creative Writing
Drama
Music
Audio Recordings

They might make a presentation concerning:

History of the water areas.
Changes according to seasons.
Effects of people on the water area.
Animal life of the water areas.
Pollution.
Water is _____.
Uses of the water.

Give your presentation for:

Another classroom.
A parent group.
A Teacher Center (if there is one in your area).
Old people's home.

Older students also might develop a nature trail near the water area to be used by younger students and their teachers. Set up "learning center areas" with activities for the children to do. Use some of the ideas in this handout to develop the "centers".

• • • •

MORE ON SINKING AND FLOATING

ESTIMATE
HYPOTHESIZE
INVESTIGATE
CLASSIFY
INQUIRE

Make a collection of classroom items for this activity.

objects
Laminated Card
Sink
Float
Tub of water
If a table is not available place this activity on a piece of plastic on the floor.

Help the children to find ways to record their findings.

A chart can be made by having children glue pictures of things that do and do not float.

QUESTIONS TO CONSIDER

-On what basis can children categorize which objects will sink or float?

weight
shape
size

WATER HAS WEIGHT

WATER'S WEIGHT HELPS THINGS FLOAT

-Does it make a difference if the water is hot or cold?

-Does it make any difference if the water is deep or shallow?

Vocabulary to Model:

float
sink
heavy
light
deep
shallow
ripple
wave
bubble
pour
flow

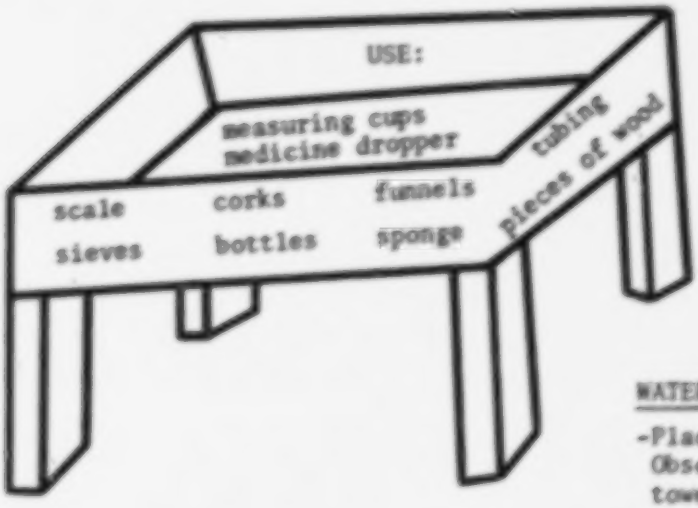
Have a boat race. Divide your water table into lanes. Children blow their boats with straws.

Encourage children to use this vocabulary in their writings and speech.

FINDING OUT ABOUT WATER

Using a Water Table

A WATER TABLE is a great way to involve children in their own learning. It is a great time for you to observe children informally. You can learn a great deal about how children are thinking and what they know about the world. A water table can be a large bowl, a dish pan, or anything which will hold water.



THINGS DISSOLVE IN WATER

Dissolve some salt in water. How does the water taste? Let the water evaporate. Can the children predict what will be left? Try dissolving other things in water. You might try oil, sand, gravel, sugar, etc.

WATER EVAPORATES INTO THE AIR

-Place wet towels in various places. Observe what happens. Why do some towels dry faster?

-Write on chalkboard with a wet finger.

-Put measured amounts of water in various locations. Observe what happens.

SOME THINGS ABSORB WATER

Find as many things as possible that will absorb water. Which things absorb more water than others? Try some of these things:
- sponge
- fabric
- feathers
- plastic
- paper towels

Soak some dry beans in water. Observe what happens

Try the paper towel experiment to see if the TV commercials are true.

A WATER WHEEL

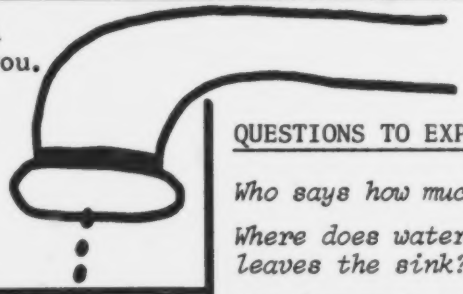
Your students will find it exciting to design and test water wheels. Get out your tinkertoys and other building materials in your classrooms. What will turn a water wheel? Will twice the flow of water turn the wheel as fast?

There should be lots of writing to share with others. (I found out _____, so and so happened, I did _____.) Be sure to provide places for children to post their writing to be shared.

Many homes have septic tanks. See if you can visit a home where a tank is being installed to find out how it works.

How many styles of water taps can be found. Make a collection if you can. Look through catalogs. Go for some walks.

Obtain some old water taps. (A plumber might be able to help you. In fact, invite him to visit your class.) Take them apart. Which parts allow water to go through? Why? Which parts help to prevent leaks? Learn how to fix a leaky faucet.



Find a leaky faucet. Collet the water which drips from it over a 24 hour period. Estimate how much water is lost in a week, month and year.

How many water outlets are in homes or in your school? A great counting activity! Have students research their homes, bring the information to school and record it on a graph. Why might some homes have more outlets than others?

Visit the local waterworks. Work with children beforehand to prepare questions for which they want answers. Here are some to get you started:

What is the source of the local water supply?

How much water does the town use each day?

What is the peak time of day?

Does your town have a water tower?

What can you find out about it?

How much water does it hold?

How high is it?

Why is it placed in its present location?

QUESTIONS TO EXPLORE

Who says how much water costs?

Where does water go when it leaves the sink?

How does water come out of the tap?

How much water is wasted by a leaky faucet?

Can the water be reused?

Is anything done to water we drink?

What side of the sink has the hot water?

How much does water cost in your community compared to other communities?

Which direction does the water circle when it goes down the drain?

Why do cold water pipes drip on a warm day?

How long does it take to empty the sink?

Visit a plumbing supply. Look for the differences in pipes which are used to transport water.

What is the largest diameter of pipe?

What is the longest length?

What material are pipes made?

What is the best material?

Compare a new pipe with an old pipe.

Find A Puddle
Trace with chalk around the contours of the puddle. Trace again every 15-30 min. You will have a good contour map. Each of your tracings will have a similar shape.
Along with this activity, read "The Rain Puddle" by Adelaide Holl.

Investigate forms of water in the air - breath, steam, fog, condensation, rain, hail, snow, ice.

Where do we use water? (shower, laundry, car washes, cleaning, etc.) How many more uses can your students find?

Take a walk inside and outside your building. Look for all the things children can find that have a connection with water.

Make a collection of water in its many forms and uses. A giant collage could be made with your picture collection or use the pictures in classification activities.

Start making a list of all the living things that depend on water. Instead of keeping just a list, why not make your list in the form of a mural? Place a large sheet of paper on the wall, add your pictures and children's writings and you'll have something to keep children involved for a long time.

FIRE HYDRANTS

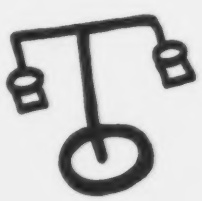
-compare several

-measure parts

-talk to a fireman
 Why is it painted red (yellow)?
 Who can use it?
 How does it get water?
 What is the cost?
 What is the purpose of it?

-examine writing on it
 Who made it?
 When was it made?
 Where was it made?

-find out how close to the school it is placed.



WATER HAS WEIGHT

Record the weight of materials in dry and wet states. Talk about more than and less than. Record your information on a chart or graph. Weigh a cup of water and a cup of air. Weigh cups of sand. Add water to one.

"Rain, rain go away, Come again some other day"

You can sing this song or do some of the following:

Where do raindrops make the biggest splash: on the pavement?
on the grass?
in soil?
in a pool of water?

How do drops feel on the skin?

How does it feel before and after a rain?

Keep a chart or graph of the following information:

- *how much rain falls*
- *number of days there was rain*
- *number of times rain was forecasted correctly*
- *what various people might be doing during a rain storm*

"One Misty Moisty Morning" by Mother Goose is a good starting point for a discussion of rain clothing.

- *Find materials which will absorb and repel water.*
- *Check raingear which children wear to school. Find out which materials are the most water repellent.*
- *Bring out all of the old catalogs. Find out how much the various articles cost.*
- *If children wear boots, have children find out if the boot size and the shoe size are the same.*

Vocabulary to Model:

clouds	water repellant
condense	mist
evaporate	steam
raindrop	breath
repel	pour
absorb	flow
freeze	

"Play After Rain" by James S. Tippett is a poem about a small boy who goes out to play after a rain. Brainstorm with your children for things they like to do after a rain.

Breathe on a cold mirror, window or foil. Feel the cloudy places. Observe how the warm air striking the cold air makes moisture. Lilian Moore in "Dragon Smoke" describes this condensation process. Be sure to read this poem to your students.

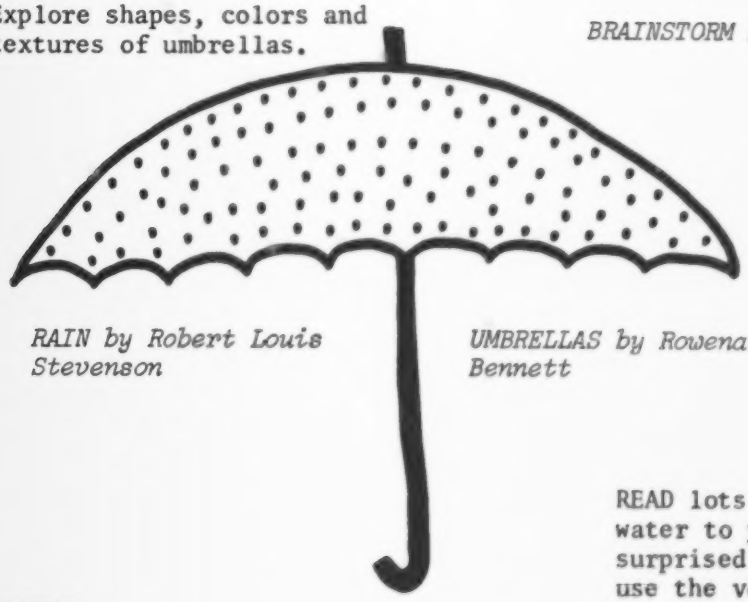
The evaporation - condensation cycle can be observed in a terrarium. Science: Informal Education, Center for Teaching & Learning, UND, had directions for making a bottle terrarium.

Science Activities for Elementary Children by Nelson and Lorbeer also has directions. These books also have experiments for making clouds.

You might want to explore some of these questions with your students:

Where does rain come from?
Where do clouds come from?
What makes thunder?
What kinds of clouds are there?
What causes lightning?

Explore shapes, colors and textures of umbrellas.



BRAINSTORM FOR: words that describe rain and water

where rain falls and does not fall

what one can do in the rain

RAIN by Robert Louis Stevenson

UMBRELLAS by Rowena Bennett

READ lots of poems about rain and water to your students. You'll be surprised at how soon your students use the vocabulary they are hearing in their own writing.

POEMS

RAIN - Myra Cohn Livingston
RAIN - Shel Silverstein
SUDDEN STORM - Elizabeth Coatsworth
A SHOWER - Izembo
RAINDROPS - Isla P. Richardson
APRIL RAIN SONG - Langston Hughes
RAINING AGAIN - Dorothy Aldis
SUMMER RAIN - Eve Merriam
LITTLE RAIN - Elizabeth Madox Roberts
RAIN SIZES - John Ciardi
CITY RAIN - Rachel Field
RAINBOW FOR JOYCE - Ida DeLage
IN TIME OF SILVER RAIN - Langston Hughes
RAIN IS SO RAINY - Beatrice Schenk de Regneirs
IT IS RAINING - Lucy Sprague Mitchell
APRIL - Sara Teasdale
RAIN IN APRIL - Eleanor Hammond

Examine some rain water with a magnifying glass or microscope.

How does rain look on sidewalks, buildings, animals and earth?

"Rain" by Shel Silverstein is a poem children enjoy. Be sure to read it more than once.

Take time out to listen to the sound of rain in different locations.

"Night Storm" by Jane Sherman will appeal to any child who has been scared by a thunderstorm. This poem might be a good lead-in to children discussing their feelings about thunderstorms.

"The Sound of Water Is:" by Mary O'Neill. A great poem to use as a frame. Try also "Spring Is:"

IT IS RAINING
Lucy Sprague Mitchell

This poem begins "Where would you like to be in the rain?"

After a brainstorming session, it might be fun to have each child write their own verse and then illustrate it with water color, cloth collage, chalk, etc. These could then be combined into a class book.

Talk about how things look before and after a rain.

grass

sky

earth

trees

animals

Find words to describe the changes.

dry-wet

dirty-clean

hard-soft

Observe clouds on a rainy day and on a clear day.

WAITING AT THE WINDOW
A.A. Milne

In this poem, a child watches two raindrops "race" down a window pane. I'm sure most children (and most adults) have done this at one time or another. How fast can a raindrop slide down a window pane? What are good times to watch raindrops on a window? Compare on a screened and unscreened window.

Along with this poem use "Raining Again" by Dorothy Aldis.

LIST WORDS WHICH DESCRIBE SOUNDS OF THE RAIN.

PITTER-PATTER
SPRINKLE
SPLISH-SPLASH

ADD TO YOUR LIST EVERYTIME YOU HEAR A NEW WORD. HOW LONG CAN THE LIST BE? COULD IT GO AROUND THE WALLS OF YOUR ROOM?

Make a book of rainy-day rhymes.

Make a Facts About Rain book.

W E A T H E R S A Y I N G S

We have many weather sayings. Some examples:

-flies swarm before a storm
-halos around the moon or sun mean rain will come
-moss dry, sunny skies
-moss wet, rain you'll get

Try to find other sayings. You might try to find out if the sayings are true for your area. Make a book of all the sayings you collect. Have children classify the sayings by type of weather.

I LIKE IT WHEN IT'S MIZZLY
Aileen Fisher

A great poem to read on those misty drizzly mornings! Children might enjoy illustrating this poem with water colors, tempera, crayons, resist, etc.

AFTER A BATH
Aileen Fisher

Brainstorm for what children like to do after a bath. Graph how many take a bath or a shower. How much water does it take to have a bath? Children might be very surprised at how much water they use.

THE TUB
George S. Chappell

Children who often play in their bath will readily identify with this poem. Brainstorm for other pretend things children do while bathing. A group of children might enjoy illustrating this poem and putting it in book form.

I WENT FISHING
Unknown

This poem has a rhythm to it that children will enjoy. Is fishing a recreational or commercial activity in your area? Exchange "fish stories" with your children. What kinds of fish are caught in your area? What is used for bait? What kinds of equipment are needed? This one poem might be a lead-in for a unit of study on fish. Be sure to use the book, Swimmy by Leo Lionni with your students. Notice the many art techniques he uses to create a feeling of water and of the sea.

IF ALL THE SEAS WERE ONE SEA
Anon.

This old rhyme has a pattern that children can easily follow in their own writing. Janina Domanska has a book out under the same title. If you can get the book, point out to your students the many patterns in the illustrations.

GEORGIE AND THE NOISY GHOST
Robert Bright

Georgie and his family lost at sea in a thick fog.

RAIN, RAIN RIVERS
Uri Shulevitz

This book has marvelous pictures of rain, streams and water. It is full of wonderful language -

"Waves bellow and roll
Rush, splash and surge
Rage, roar and rise."

Read it with feeling and expose your students to many new words. Use the language as starters for brainstorming sessions and patterns for students' writing.

Where does it rain?
How does it rain?
Who would be out in the rain?

HIDE AND SEEK FOG
Alvin Tresselt

The soft watercolor washes by Roger Duvirsin in this book help to give the reader a feeling of being in the fog. Point out to your students how this illustrator used watercolors to achieve the effect of fog. Then put out the watercolors and watch what happens.

A WET AND SANDY DAY
Joanne Ryder

A little girl at the beach stays to enjoy a warm summer shower. The pictures of sea and sand invite readers to share in the little girl's joy. Enjoy, with your children, the lovely watercolor wash illustrations in this book. Can children guess how the effect of rain was done?

DADDY FELL INTO THE POND
Alfred Noyes

Children have a great deal of fun with this poem, both illustrating and listening to it. Paints, fabric scraps, chalk, construction paper are all mediums children could use to illustrate this poem.

THERE ARE BIG WAVES
Eleanor Farjeon

Use this poem along with <u>Rain, Rain Rivers</u> by Uri Shulevity. If you are any place where your students can watch waves, read this poem as you watch.

"Paddle-to-the-Sea"
by Holling Clancy Holling

An Indian boy in the Canadian wilderness carves a man in a canoe, names it "Paddle-to-the-Sea", places it in a stream and hopes the canoe will eventually reach the sea. This book tells the story of "Paddle-to-the-Sea's" journey.

Grades two, three and older will undoubtedly enjoy this story. It is too long to read in one sitting, but is easily divided into short chapters.

If you are near a saw mill, make a visit there to learn about its operation. Is it the same as the book?

Make a salt/flour map of "Paddle-to-the-Sea's" journey. Go on a walk to collect materials (pieces of wood, plants, etc.) which can be placed on your three-dimensional map.

Trace "Paddle-to-the-Sea's" journey on a map. Perhaps children might enjoy making their own map of the journey. A large mural could be made showing the various adventures of "Paddle-to-the-Sea."

After reading about "Paddle-to-the-Sea" being caught in a log jam and constantly being washed ashore where he would be trapped, take a walk down by the river to observe exactly how this could happen. Can children find any places the small canoe would become stuck?

Can children find pictures of the many places and things mentioned in this book?

Look in magazines, books and picture files. Can children find more information about:

Lake Superior?

Superior, Wisconsin?

Sault Ste. Marie?

A canal lock?

Lake Ontario?

A sawmill?

"Paddle-to-the-Sea" - Continued

The margins of this book are filled with little tidbits of information. For example, Lake Superior's outline makes a wolf head. There are also many diagrams showing the inside of a freighter, a saw mill, etc.

Be sure to have your maps and globe handy while you're reading this book!!!

ESS From Webster McGraw-Hill Book Company has a guide entitled "Stream Tables" which gives directions for setting up a stream in your watertable. A great resource to have!

Put this book out where children can spend lots of time looking at all of the diagrams, pictures and maps.

USE THESE BOOKS ALONG WITH "PADDLE-TO-THE-SEA":

THE STORY ABOUT PING
Marjorie Plack

A small boy stays afloat in the Yangtze River by clinging to a barrel.

CURIOUS GEORGE RIDES A BIKE
H.A. Rey

George becomes absorbed in making newspaper boats and floating them downstream. Can your students make newspaper boats which will float?

A FUN ACTIVITY TO DO WITH YOUR STUDENTS WOULD BE TO PUT NOTES IN BOTTLES AND SEND THE BOTTLES FLOATING DOWN THE RIVER. BE SURE TO PUT THE SCHOOL'S ADDRESS IN THE BOTTLE AND ASK WHOEVER FINDS IT TO CONTACT THE SCHOOL. PLOT ON A MAP THE JOURNEY OF THE BOTTLES. WHOSE WENT THE FURTHEST, ETC.

* *

EXPLORE SOME OF THESE ACTIVITIES WITH YOUR STUDENTS

Things which sink and float.
What kinds of boats can your students build?
What animals are seen in the vicinity of your waterway?
What evidence is there of animals?
Visit a sawmill.

Here's an easy way for your students to make a mural:

1. Obtain a large piece of paper.
2. Decide with your students what will be on the mural. This makes a good brainstorming session.
3. Divide your class into groups to draw or paint the various things for the mural. For example, one group might draw trees, another people, another animals, etc. Don't forget to have a small group to prepare the background.
4. Give each group of children drawing paper and various art media. They make their animal, tree, person, etc. on the paper, cut it out and glue it to the background.

This method will involve all students all of the time, without having too many working on the large paper at the same time.

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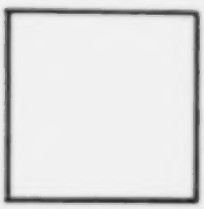
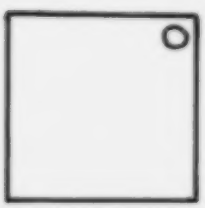
Going for a walk???

Do you want children involved in recording information as you walk along?

Here's an easy clipboard your student can make.

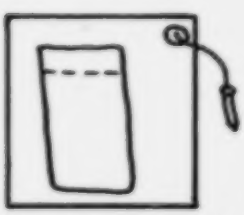


Obtain a strong piece of cardboard. Cut it for the size you wish. It can be left plain or covered with contact paper.



Punch a hole in one corner.

Attach a pad of papers with a stapler.



Attach a pencil with a piece of string or yarn and you're ready to start taking notes.

Provide one clipboard for each student.

"Wind Song," Lillian Moore
"Wind," Aileen Fisher
"The Wind," James Reeves
"Go Wind," Lillian Moore
"Newspaper Wind," Aileen Fisher
"Wind Capers," Lillie Patterson
"Gilberto and the Wind," Marie Hall Ets
"Whistle for Willie," Ezra Jack Keats
"I See the Wind," Layne Mizumura
"Who Took the Farmer's Hat?," Joan L. Nodset
"Great Big Air Book," Richard Scarry
"Follow the Wind," Alvin Tresselt

From March 1979 Notes to Fort Yates Follow Through Staff.

WINDY DAYS

BRAINSTORM for words about WIND. After children have given many words, classify. For example:

SOUNDS OF THE WIND

whines
whistles
howls
sings
moans

ACTIONS OF THE WIND

pushes
shakes
ruffles
puffs
pushing

CLASSIFY: Things that move with the help of the wind.

Keep a list of wind words as they occur in literature and classroom and community events. Don't forget newspapers and TV here.

gale
gust
blast
tornado
chinook
hurricane
breeze
typhoon
tempest
windward

Through painting, talking, writing and drama, children can demonstrate what they know about wind.

PRETEND:

You are a balloon or feather being blown about by the wind. How would you move?

Move like birds soaring on the moving air.

Obtain a balloon and watch it rise in the moving air.

Do children know names for wind?

breeze
gale
gust
etc.

Make use of weather charts.

Review Bill Martin's book, Old Devil Wind - Instant Reader.

Make a puppet show of the characters. How would they show the wind? Add sound effects with it. Make your own tape.

Read other cumulative stories. For example, "This is the House that Jack Built" or "The Old Woman and Her Pig."

Use the sentence structure for further study:

Ghost came out of the wall
and he began to wail.

Derrick jumped into the
pond and began to wail.

Janice jumped into the
pond and began to laugh.

Observe the art work in this book. You might want to do your own illustrations--use water colors, etc.

Provide reference materials to locate information about wind. Make a book to record the information found about wind.

ART

Look for pictures in trade books to see how windy days are illustrated.

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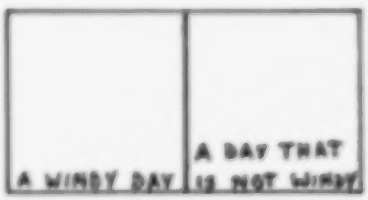
Draw a scene of a windy day and one that is not a windy day. Talk about the contrast.



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Cut silhouette shapes of things that move in the wind. Glue them to a background to make a mural or collage. Make the background with water colors or sponge painting.

Give children pieces of paper on a windy day. Have them stand outside. Can they make the paper stick to themselves by standing in the wind? Do they have to hold the paper? What holds the paper to their body?

Give the children some paper and let them make pinwheels. Take the pinwheels outside and see what happens.

Make kites - even kindergarten children can make simple ones. Take an afternoon to go out and fly your kites. Which flies best? Highest? What kinds of days are best for kite flying?

Give children some old adding machine tape or computer tape. Run outside with the tape and observe how it will stream out behind the runner.

Fans cause the air to move, creating a cooling effect. Bring a fan and observe how it circulates the air. Let the children make their own fans by folding paper or using paper plates or heavy cardboard.

How long can the class or group of children keep a feather or a balloon moving?

Look for indicators that show when air is in motion -

leaves moving

dust scattering

flags waving

grass blowing

Have children observe the movement of smoke.

Watch the drift of clouds and the direction in which they are moving.

Use the poems:

"Who Has Seen the Wind?"
by Christina G. Rossetti
"Wind Song" by Lillian Moore
"The Wind" by Robert Louis Stevenson

Blow on a cup of steaming liquid and observe how the steam is blown away.

FIND OUT WHICH WAY THE WIND IS BLOWING - MAKE A WIND VANE

Make a wind vane to find out which way the wind is blowing.

Cut a paper fin. Glue it to the end of a straw. Push a pin through the middle of the straw. Stick the pin into the top of the eraser of a long pencil.

Take the wind vane outdoors. Stick the pencil into the ground. Make sure the straw moves freely.

Watch the wind vane. The wind vane turns into the wind. From which direction does the wind blow? Make other wind vanes and place them in different places.

Record what you see.

MOVING AIR CAUSES
THINGS TO VIBRATE
AND MAKE SOUNDS

WIND IS MOVING AIR

(CONTINUED)

1. Air moving past the vocal cords produces sounds.

   Place hand on the throat and hum.

   Hold one hand on throat and the other in front of the mouth. Talk to someone. Feel the vocal cords vibrate and the puffs of air leaving the mouth.

2. Blow up a balloon. Pinch the mouth end closed and then slowly let the air out. Listen for the sound. See if the sound can be varied.

3. Tube Telephone: You will need some type of hose (an old garden hose will work fine) and two plastic funnels. If you use a garden hose, cut off the metal ends. Push the funnel into each end of the hose and begin talking. A long hose will allow children to place some distance between themselves.

4. Read the poem "Eletelephony" by Laura E. Richards.

WIND SOCK

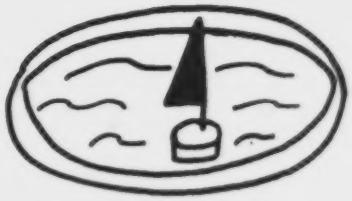
Make a wind sock. Bend a light wire into a circle and attach a thin cloth to it. Attach this to a stick and place your wind indicator outdoors. Observe in which direction the wind is blowing.

Cut a strip of tissue paper. Slash one long end of it.

Attach the other end to a stick or ruler. Hold the stick in various locations to see wind movement.

SET UP A CENTER WITH COLORED PAPER AND CRAYONS. HAVE THE CHILDREN MAKE THEIR OWN FANS.

What do you do with a fan?
Fan yourself slowly, then rapidly. Is there a difference in the air you feel?
Does the size of the fan make a difference?
What else can you do with a fan besides cool yourself?
Can you use it to move pieces of paper across a floor?



Set up a water table for this activity. You can use a large dishpan, if you don't have a commercial one. Children can make sailboard from:

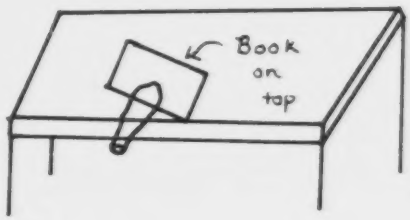
milk cartons
corks
wood
boxes
styrofoam

Use paper plates, straws, heavy papers, etc., for sails. Fan the boats and observe how the wind helps them to move across the water. Find out which boat materials work best. Have some races with the boats. Help children to draw conclusions about material and amount of wind, which might affect the outcome of the race. This experience could be moved outdoors, using either fans or the wind. When outside, let the children talk about what they can feel in the way of air moving.

Blow up a balloon, but do not tie it shut. Instead, let it go and observe how the air being forced out sends the balloon flying. A rocket.

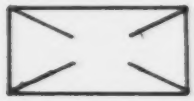
Wash some clothes or pieces of cloth. Hang some outside in the wind or above a vent which will have blowing air. Hang others away from the wind. Find out which ones dried best.

MOVING AIR (Wind) CAN BE USED TO DO WORK



Place a balloon on a table or desk, so that the opening hangs over the edge of the table. Place a book on top of the balloon. Blow up the balloon and watch the book rise up. Compare this to various types of air pumps.

Demonstrate a windmill by making a pinwheel. Cut a square of paper. Make a slash from each corner towards the center.



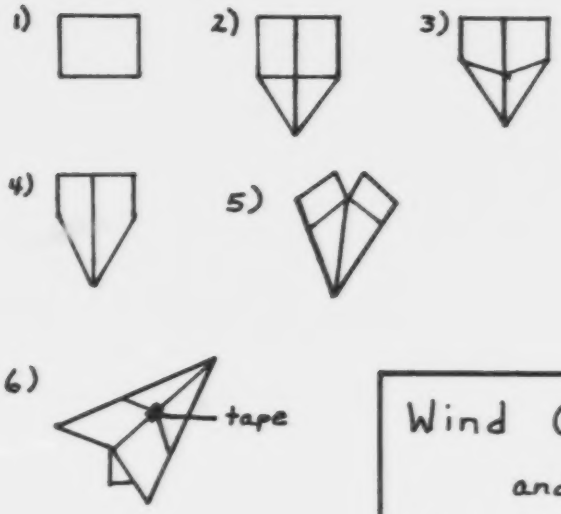
Bend every other corner to the center.

Hold the folded corners to the center by sewing with needle and thread or by gluing them.

Use magazines and books to look for examples of how people use wind to do work.

MAKE A GLIDER

Give children an opportunity to experiment with making gliders and observe how air currents carry the plane. The Funcraft Book of Flying Models by Scholastic has many easy and fun gliders to make. Here's an easy one to get you started.



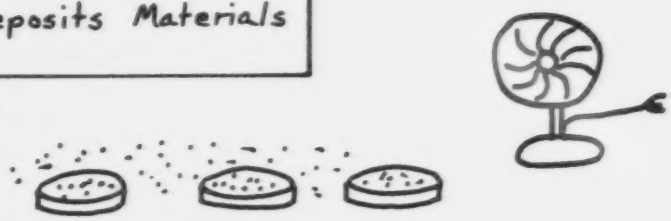
ON A WINDY DAY, SET UP A BOARD IN A FIELD OR OPEN SPACE, SO THAT THE WIND WILL BLOW AGAINST IT. PUT SOME PASTE ON THE BOARD AND OBSERVE WHAT COLLECTS ON IT.

STRAW PAINTING

Place a drop of paint or ink on a slick piece of paper. Using a straw, blow the paint into a design.

Wind Carries and Deposits Materials

STAND OUTSIDE ON A WINDY DAY. DOES ANYTHING HIT AGAINST YOU?



Collect a mixture of materials from clay to sand. Place them in a pan in front of a fan. Set several shallow pans outdoors at different distances from the fan. Turn the fan on low and observe how the wind blows the particles. Note which particles are collected in the different pans.

WIND-CARRIED MATERIALS CARVE AND ERODE THE LAND.

1. *Examine grains of sand under a hand lens.*
2. *Find some sandstone and rub it with a harder rock.*
3. *Go for a walk to look for places which might be eroded by wind.*

KITES

SAFETY TIPS

1. Don't run backwards. It's easy to fall.
2. Keep large kites away from crowds. A kite might dive and injure someone.
3. To avoid burns from the string, wear a pair of gloves.
4. Never use wire or metallic cord as line for the kite.
5. Stay away from high wires and don't fly kites during electrical storms.

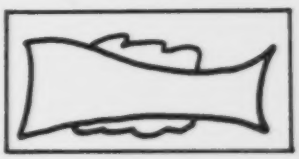
Go Fly A Kite by Ann Cook has many ideas and projects to do with kites. This author tells how she used a kite theme to give children experience with math, science and reading.

Make a kite-shape book.

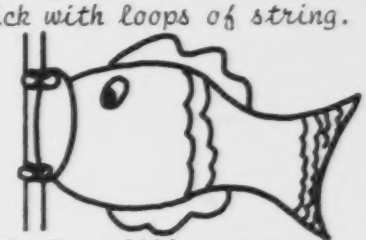
FISH KITES

Japanese families fly "Fish Kites" from poles outside their homes. Your children can also make fish kites.

Draw a side view of a fish on the top sheet of newspaper.



Make a second fish exactly like the first. Cut out the two fish. Glue the two fish together leaving the mouth open. Cut the rim from the lid of a cottage cheese carton. Attach the rim to the open mouth. Fasten the head to a wooden dowel or stick with loops of string.



POEMS

"To a Red Kite" - Lillian Moore

"A Kite" - Frank Dempster Sherman

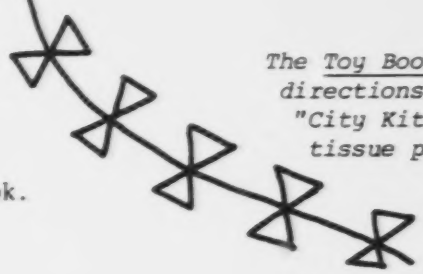
"The Kite" - Harry Behn

"Kite Days" - Mark Sawyer

"A Kite" - Unknown

"Wind on the Hill" - A. A. Milne

The Toy Book by Steven Caney gives directions for making a simple "City Kite" from straws and tissue paper.



AN EASY KITE FOR YOUNG CHILDREN

1. Paint or decorate a paper grocery bag.

2. Measure the bottom of the bag. Cut a piece of cardboard large enough to fit snugly into the bottom of the bag.

3. Cut an oval out of the cardboard to make a frame, leaving at least one inch at the narrower point.

4. Cut a ¼ inch notch at the center point of each side of the frame.

5. Cut four 1 foot lengths of kite string. Attach one piece of string and tie them together. Attach to the notches in the frame.

6. Cut an oval hole in the bottom of the bag about the same size as, but not larger than, the hole in the cardboard frame. Place frame inside the bag. Pull the attached strings through the hole in the bag and tie them to the end of the kite string.

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KITES HAVE PLAYED MAJOR ROLES IN HISTORY. DO SOME RESEARCH WITH YOUR STUDENTS ON HISTORICAL USES OF KITES, WHERE KITES HAVE BEEN USED AND FOR HOW LONG OR COMPARE HISTORICAL KITES WITH PRESENT-DAY KITES.

THE STORY OF THE KITE BY HARRY EDWARD NEAL IS AN EXCELLENT REFERENCE FOR BOTH TEACHERS AND STUDENTS. SOME OF THE TOPICS COVERED ARE:

THE FIRST KITES
KITES THAT FLEW PEOPLE
KITES THAT HAVE HELPED US
FESTIVAL AND FABLES

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"A KITE"

Frank Dempster Sherman

Young children often see things from the side or underneath side. Try to find ways of giving children the opportunity of seeing things from above. Use this poem after children have been given the above opportunity. What could be seen if you were a kite flying over your school? city? How would things appear? If you were a kite, where would you like to go?

"Three Signs of Spring"

David McCord

This poem begins "Kite on the end of the twine, . . ." This is a good poem to use as a frame. Brainstorm for other signs of spring and create your own poem.

* ° *

"Kite"

David McCord

"Kite Days"

Mark Sawyer

These poems about kite days lend themselves to illustration by watercolor. Let children choose their favorite kite-flying day to do their illustration. The pictures might then be placed together as a collage picture.

* ° *

"Kite Days"

Mark Sawyer

"Kite Song"

Avan Collum

"The Balloon"

Karla Kuskin

Record some of these kite poems on chart paper and make a

B I G K I T E B O O K .

You might even like to make it in the shape of a kite. Add stories, poems, writings and pictures of the children.